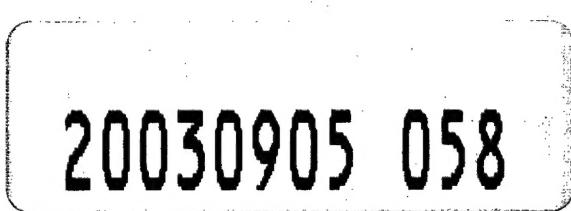


REPORT DOCUMENTATION PAGE

Form Approved OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED	
	1999	Publication Series, May/June 1999	
4. TITLE AND SUBTITLE NPMOC West/JTWC Guam 1945-1999			5. FUNDING NUMBERS
6. AUTHOR(S)			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Commander, Naval Meteorology and Oceanography Command 1020 Balch Boulevard Stennis Space Center, MS 39529-5005			8. Performing Organization Report Number Vol. 19, No. 3
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) ONR PSC 802 Box 39 FPO AE 09499 0700			10. SPONSORING/MONITORING AGENCY REPORT NUMBER
11. SUPPLEMENTARY NOTES Naval Meteorology & Oceanography Command News, May/June 1999, Vol. 19, No. 3, 31pages.			
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.		12b. DISTRIBUTION CODE A	
ABSTRACT (Maximum 200 words) Naval Meteorology & Oceanography Command News, May/June 1999, Vol. 19, No. 3 News Features: U.S. Naval Pacific Meteorology and Oceanography Center West disestablishes after 54 years of service (cover story); Navy at SSC brings early Christmas cheer to a Mississippi homeowner; Electronic handbook – fleet support at the speed of light; Newest survey ship is launched. Community News: NO96; NAVOCEANO; ; Fleet Numerical Meteorology and Oceanography Center; Atlantic region; Pacific region; European region; Oceanography detailer. Departments: Training; People and places; Accomplishments			
			
14. SUBJECT TERMS ONR, Navy, Guam, Electronic handbooks, Fleet, Naval meteorology, Naval oceanography			15. NUMBER OF PAGES
			16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED	18. SECURITY CLASSIFICATION OF THIS PAGE UNCLASSIFIED	19. SECURITY CLASSIFICATION OF ABSTRACT UNCLASSIFIED	20. LIMITATION OF ABSTRACT UL

NSN 7540-01-280-5500

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Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. Z39-18
298-102

NAVAL METEOROLOGY
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NEWS

May / June 1999

1945 - 1999

NPMOC West/JTWC GUAM
1945 - 1999

AQ F03-11-2492

News Features

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On the Cover

In the foreground CDR Debra Ford, Commanding Officer of the Naval Pacific Meteorology and Oceanography Center West; CAPT Donald Mautner, Commanding Officer of Fleet Numerical Meteorology and Oceanography Center and former Commanding Officer of NPMOCW/JTWC; CAPT Ty Aldinger, Commanding Officer of Naval Pacific Meteorology and Oceanography Center; and RADM Kenneth Barbor, Commander of the Naval Meteorology and Oceanography Command; rendering honors at the NPMOCW disestablishment ceremony.

In the background Super-typhoon Paka heads toward Guam and the U.S. Navy Aerological Station, Guam.



The readers of NMOC News are invited to submit articles, photographs and letters to the editor for publication. However, certain guidelines should be followed when making submissions. Principal among these are below:

ARTICLES

1. When possible, submit articles electronically via e-mail. If electronic transmission is not available, articles should be submitted typed, double-spaced, single side on 8 1/2 x 11 white paper. Include the title of the article and the name and telephone number of the author on each page. If necessary, also provide the name and telephone number of a technical contact. When possible accompany the article with photographs or black and white line illustrations.
2. Authors of material published will receive a byline credit.

PHOTOGRAPHS

1. Preferred formats are color and black-and-white glossy prints. High resolution, digital files may also be submitted. Send each image as a separate file (*.tif images preferred). For best results do not embed images inside text files.
2. For each photo/image submitted, include a brief caption describing the action taking place and identifying any personnel/equipment in the photo.
3. Include the name of the photographer if known. Photos will be credited in the publication.
4. If requested in writing, photos will be returned. Submit material to:

Public Affairs Office/Editor
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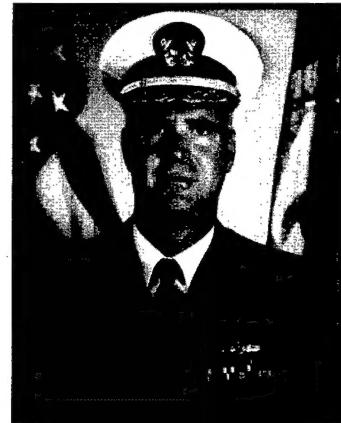
Dianna L. Lamb
Cover Graphics

Elizabeth D. Schafer
Layout/Design

NMOC News is published bimonthly for personnel of the worldwide Naval Meteorology and Oceanography Command. The Secretary of the Navy has determined that this publication is necessary in the transaction of business required by law. Funds for printing have been approved by the Navy Publications and Printing Policy Committee. Contents of NMOC News are not necessarily the official views of, or endorsed by, the U.S. Government, the Department of Defense, or the Department of the Navy. The editorial content is edited, prepared and provided by the Public Affairs Office of the Commander, Naval Meteorology and Oceanography Command. All photos are U.S. Navy photos unless otherwise credited.

Accentuate the positive

I have just returned from the disestablishment ceremony for our center in Guam. Other articles in this issue of CNMOC News highlight this event but let me provide my takeaway.



Our activity on Guam has a rich heritage. We have much to look back on and for which to be proud.

Guam was where many in our ranks honed their forecast skills and achieved significant qualifications. On Guam you endured the trauma of typhoons, earthquakes and plane crashes. You made life-long friends and welcomed new family members. You provided critical services to Naval and DoD activities throughout our largest AOR. In every endeavor the men and women of our center at Guam have been true professionals and valued members of the community.

BRAC has changed the playing field. Explicit congressional language has moved the Joint Typhoon Warning Center to Pearl Harbor, and we have reconstituted other missions in Yokosuka and Bahrain. In this era when the only constancy is change, we must, and we have moved on. Pearl Harbor has issued its first typhoon warnings, and Yokosuka is monitoring and routing ships in WESTPAC and the Indian Ocean.

We must, as the old song went (and this will really date me), "accentuate the positive." Increased tour lengths and prospects of homebasing (to some degree) at each site offer the potential of a greatly expanded base of experience and knowledge in our work force. Pearl Harbor and Yokosuka will benefit from robust connectivity with the fleet — both at the waterfront and electronically.

As we enter the new millennium, it is truly important that we seek those areas where change will "accentuate the positive" and move smartly ahead with new vigor.

A handwritten signature in black ink, appearing to read "K E Barbor".

Kenneth E. Barbor, USN
Rear Admiral, U. S. Navy

from the command master chief

I'm honored to be the new CMC, hope to visit everyone

I've served more than half my life, 27 of my 45 years, in the U.S. Navy, more importantly in the Aerographer's Mate rating. To be selected as the Naval Meteorology and Oceanography Command Master Chief gives me no greater pleasure in the world. To say that I am honored is an understatement. I will take on the awesome responsibility of representing each and every one of you to the best of my ability.

Master Chief Coniglione's tenure as our community's Enlisted Leader has set a standard of excellence to build upon. He superbly led us through tough manpower cuts, AG recruiting shortages, BRAC closures and many changes in Navy Leadership. Throughout, he remained steadfast in his commitment to you — "the troops." I don't have to tell you that following a guy like AGCM(AW) Robert Coniglione is not going to be easy, and I challenge you all to give me feedback.

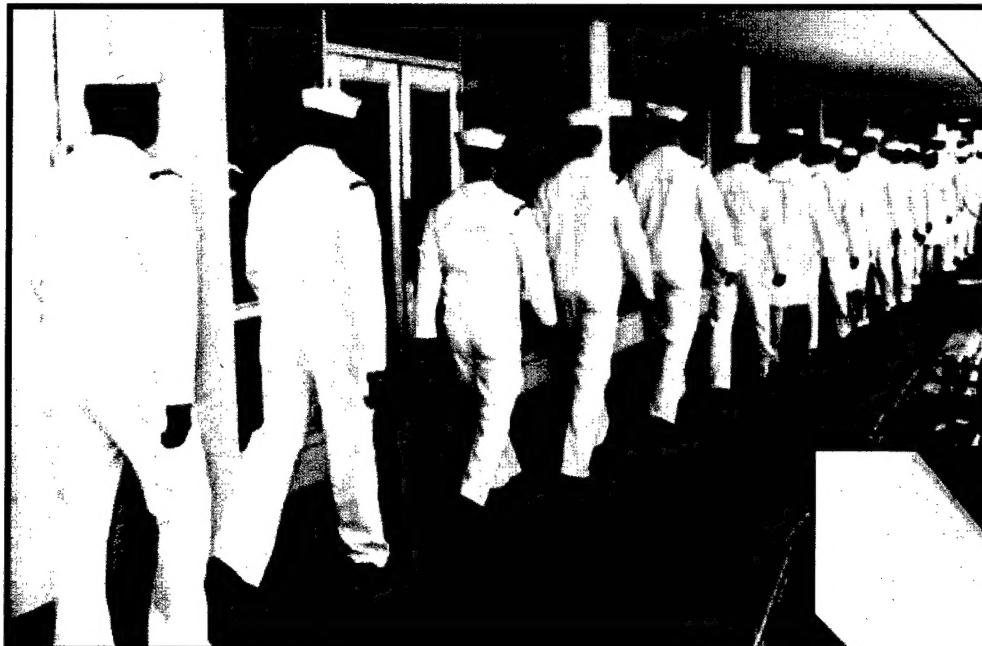
I hope to get out as much as Master Chief Coniglione did and visit every Detachment that I can. I want to meet you, see first-hand the outstanding support that you are providing to the fleet, and hear your concerns and suggestions.

Once again, I am absolutely thrilled to take on the "best job in the U.S. Navy."

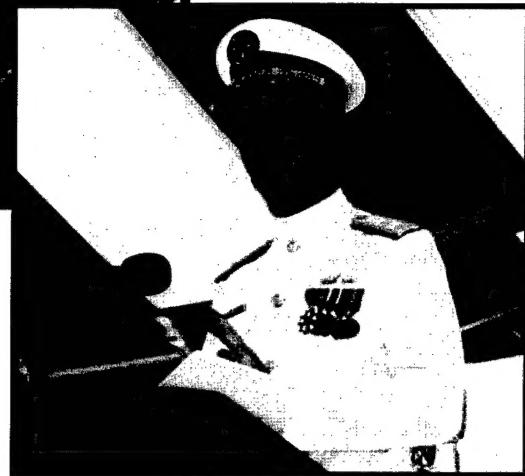


AGCM (AW) Robert W. Harlan, USN
Command Master Chief





(Above) NPMOCW Officers and crew debark. (Right) RADM Kenneth Barbor remarks to the audience.



U.S. Naval Pacific Meteorology and Oceanography Center West disestablishes after 54 years of service

by LCDR Margaret Smith, Naval Pacific Meteorology and Oceanography Center West Public Affairs Officer

The METOC center established 54 years ago with the Typhoon Tracking Center — Naval Pacific Meteorology and Oceanography Center West on Guam — was disestablished in a ceremony on a typical breezy and warm Guam day under a brilliant blue sky, April 7.

"While we are saddened to see the end of a legacy, we are proud to have been a part of it — and we are especially proud to be the last," said CDR Debra Ford, NPMOCW Commanding Officer.

CAPT Don Mautner, the keynote speaker and a former commanding officer of the center, said the disestablishment closed a chapter in history. It had been born after the devastating Fleet losses in the typhoons of 1944 and 1945, which

resulted in FADM Chester Nimitz's decision to place the Typhoon Tracking Center on Guam.

And the decision, he said, had stood the test of time.

"Any decision made in the career process that stood the measure of time for 54 years was probably a pretty good decision," he said, noting also that that the disestablishment ceremony on Nimitz Hill was appropriate.

Mautner, now commanding officer of Fleet Numerical Meteorology and Oceanography Center, reminded the audience that the center became "joint" with the Air Force "before we even knew what joint was. It was just the right thing to do," he said.

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Cover Story

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But recent advances in satellite technology have created the ability to monitor weather and track typhoons over large areas of ocean, making practical the transfer of Guam's METOC mission to NPMOC Yokosuka and the Joint Typhoon Warning Center to Naval Pacific Meteorology and Oceanography Center at Pearl Harbor. Maunter assured the audience that NPMOCW's tradition of outstanding service will not end with its closure but will instead transfer to Yokosuka and Pearl Harbor.

More than 100 members of the local military and civilian communities, command family members and off-island METOC VIPs gathered to honor the culmination of over 54 years of distinguished service by NPMOCW.

RADM Ken Barbor, commander of the Naval Meteorology and Oceanography Command, recalled the professional METOC support he always received from NPMOCW while operating in the Pacific and Indian ocean theaters.

In a letter read by Barbor, RADM W.G. "Jerry" Ellis, the Oceanographer of the Navy, recognized NPMOCW's reputation for putting the Fleet first while maintaining responsibility for the largest and most challenging AOR of all the major METOC centers.

He noted the command's implementation of new computer uses and products and the maintenance of one of the most heavily visited web sites in the community. He also recognized the center's challenges in Typhoon Paka, Korean Airline Flight 801 crash on Nimitz Hill, Kurdish evacuee processing, and the standup of a new DoD school within the command's building.

And he praised the center for its execution of BRAC-95, the relocation of JTWC to Pearl Harbor and seamless transfer of the regional METOC mission to Yokosuka.

CAPT W. Ty Aldinger, NPMOC commanding officer and NPMOCW ISIC, emphasized NPMOCW's part of the rebalancing of Pacific and Indian oceans METOC assets. He said the disestablishment of NPMOCW was the catalyst in the decision to align major METOC centers with the three-star warfighting commanders and stand-up echelon three commands at Bahrain, Yokosuka and San Diego.

He also recalled NPMOCW's history of dedicated Sailors, always supporting the Fleet customer with the courage to "do the right thing, not just do things right."

And he reminded the audience that the command was doing the same mission with 40 crew members that it did in 1997 with 100.

"While we are saddened to see the end of a legacy, we are proud to have been a part of it — and we are especially proud to be the last."

— CDR Debra Ford, NPMOCW Commanding Officer

Ford commended the crew for concluding operations on Guam with excellence befitting the command's illustrious past. And although the center is closing, Ford said that she was reminded that "there will always be an aerographer on the island" by CDR Charles White, a former Aerographer's Mate and a former NPMOCW Executive Officer. Chief Aerographer Luther Jones, killed by the Japanese in World War II, rests in an unmarked grave on the island. ▲

NPMOCW has served

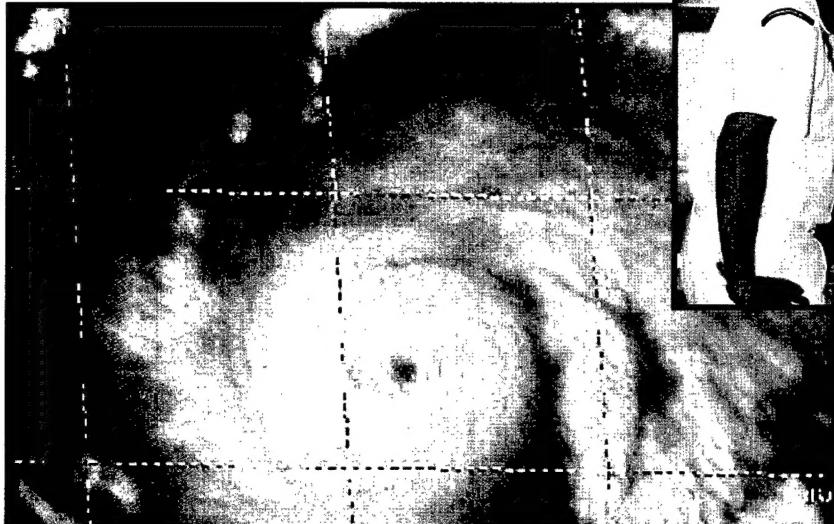
Guam has been the major Western Pacific site for environmental support to the Fleet since 1945. In January of that year, the Fleet Weather Center was established to provide weather services to the Commander in Chief, Pacific and Pacific Fleet units during the campaigns in the Western Pacific.

Fleet losses in the typhoons of December 1944 and June 1945 resulted in the establishment of the Typhoon Tracking Center in June 1945.

In 1950, FWC was authorized to provide weather services to the civil agencies and public on Guam. The service was expanded in 1953 to include the Trust Territories of the Pacific Islands. The National Weather Service assumed that role in 1995.

In 1959, the Navy and Air Force typhoon forecasting efforts were combined with the establishment of the Joint Typhoon Warning Center under the command of FWC. Typhoon Karen ravaged Guam in 1962, irreparably damaging the FWC "Quonset Hut" building. Consequently, the present typhoon-resistant building was constructed and became operational in 1965.

Throughout the years, FWC/JTWC experienced numerous organizational changes. In 1978, FWC was renamed the Naval Oceanography Command Center. Fifteen years later, it became the U.S. Naval Pacific Meteorology and Oceanography Center West, Guam, responsible for pro-



(Above) AG1 Robert Lamb and SRA Ryan Eibling confer in the Guam JTWC spaces prior to the JTWC relocation to Hawaii. (Left) Super-typhoon Pako as it heads toward Guam.

The fleet from Guam since 1945



Fleet losses in the typhoons of December 1944 and June 1945 resulted in the establishment of the Typhoon Tracking Center in June 1945.

viding meteorological and oceanographic support in the COMSEVENTHFLT and COMFIFTHFLT Areas of Responsibility.

The largest of four Navy regional centers worldwide, NPMOCW/JTWC was the hub of a huge environmental support network covering a vast portion of the eastern hemisphere; including the Western Pacific and Indian oceans, the Arabian Gulf and the Red Sea. Approximately 130 meteorologists, oceanographers, forecasters and technicians maintained a 24-hour surveillance of the atmosphere and ocean, employing advanced satellite monitoring systems, specialized environmental computer systems and state-of-the-art communication systems.

After a half-century of service from Guam, the 1995 Base Realignment and Closure Act directed the relocation of JTWC to the Naval Pacific Meteorology and Oceanography Center, Pearl Harbor and the disestablishment of NPMOCW. The relocation of JTWC to Hawaii was completed in January 1999, and NPMOCW's missions and functions were trans-

ferred to the recently upgraded U.S. Naval Pacific Meteorology and Oceanography Center, Yokosuka, in March 1999. NPMOCW officially disestablished May 31.

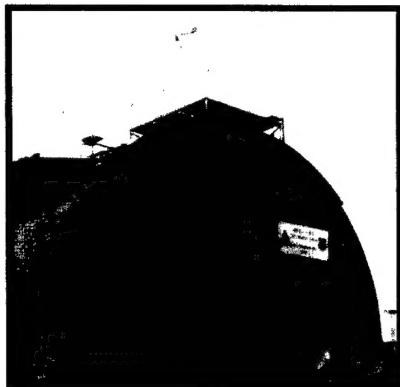
Over the years, NPMOCW/JTWC has received three Humanitarian Service Medals. The first was awarded for support provided to the Vietnamese evacuation, the second was awarded for support during Typhoon Pamela in May 1976, and the third for support during Typhoon Pako in December 1997. The command also has been awarded four Meritorious Unit Commendations for accurate and timely tropical cyclone forecasts as well as developing innovative, valuable environmental products crucial to the performance of modern naval weapons and sensors.

Although NPMOCW ceased operations March 24, the center's remaining personnel have been busier than ever. Command members have been packing and shipping the center's remaining equipment, files and property while planning PCS transfers and an occasional TAD assignment.

Continued on page 8

Cover Story

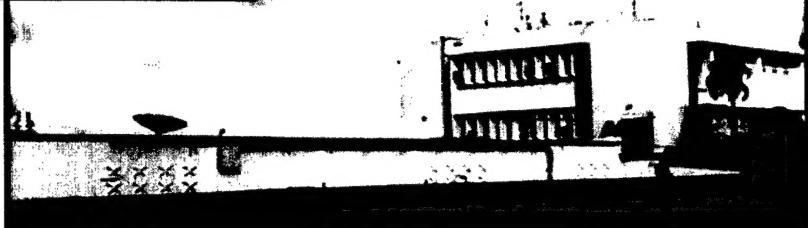
Continued from page 7



(Above) FWC/JTWC "Quonset Hut."
(Top Right) U.S. Navy Aerological Station,
Guam. (Bottom Right) Present-day
NPMOCW building.



Over the years, NPMOCW/JTWC has received three Humanitarian Service Medals.



On April 9th, the Naval Meteorology and Oceanography Center, Yokosuka officially became a center in a special ceremony attended by a host of U.S. officers from three other METOC Centers, local commanding officers and representatives of the Japanese Maritime Self Defense Force.

RADM Ken Barbor, commander of the Naval Meteorology and Oceanography Command and the keynote speaker, challenged all mem-

bers of NPMOC Yokosuka to be creative in running the Navy's newest METOC center. CAPT(S) Eric Wright, the center's commanding officer, noted that placing the center in Yokosuka is a positive move, co-locating Navy MEOTC at the "hub" of SEVENTH Fleet, where the Fleet Commander, Battle Group Commander and Naval Forces commander are located.

Wright said he viewed "assuming command of the exceptional men and women of NAVPACMETOCSEN Yokosuka, and the expansion to supporting SEVENTH Fleet operations" as singular achievements. And

CDR(S) Robert Headrick, executive officer, pointed to the "successful installation of over \$1 million worth of new equipment and the training and qualification of over 30 watchstanders in entirely new positions" as noteworthy accomplishments.

With its upgrading, the responsibilities of NPMOC Yokosuka increased significantly. The

Center stands up at Yokosuka

The turnover with Guam was completed on March 24, and the official name and echelon change to Naval Pacific Meteorology and Oceanography Center, Yokosuka became effective on April 1.

new center is responsible for providing environmental support for Department of Defense (DoD) operations over 53 million square miles in the Western Pacific and Indian oceans, an area nearly twice the size of any other support center in the Navy METOC community. These services include weather and ocean information, warnings (wind/seas/tropical cyclone), ship routing, and environmental parameters needed to give our warfighters the tactical edge. In addition, the center's Mobile Environmental Team (MET) deploys personnel to individual ships to give on-scene weather and oceanography support during major exercises and transits.

The Navy first began providing on-site weather services for U.S. Navy aircraft operations in the Yokosuka area in 1948. The U.S. Fleet Weather Center, Yokosuka was commissioned in 1952 because of the increased need for weather services to Navy Forces involved in the Korean Conflict.

After 1957 the center was redesignated as a Fleet Weather Facility because of the reduction of East Asian operations. In 1971, it was downgraded to a Naval Weather

Service Environmental Detachment (NWSED), subordinate to the Naval Weather Center, Guam. But three years later in 1974, it was re-designated as a facility and assigned to oversee subordinate detachments located throughout Japan.

In October 1978 the facility's mission was broadened again to include oceanography and the command was renamed Naval Oceanography Command Facility. The deploying MET was formed in 1980 to provide oceanographic and meteorological services to ships and staffs of the SEVENTH fleet.

The Base Re-Alignment and Closure (BRAC) Commission of 1995 made the determination to close Naval Pacific Meteorology and Oceanography Center West, Guam. In support of this closure, the facility in Yokosuka began to slowly take on regional center functions in November 1998. The turnover with Guam was completed on March 24, and the official name and echelon change to Naval Pacific Meteorology and Oceanography Center, Yokosuka became effective on April 1. ▲

Chief Aerographer's Mate Luther W. Jones, Guam hero, remains a symbol of the 'Core Values' for AGs, the Navy

In the predawn darkness of Dec. 10, 1941, Japanese Special Naval Landing Troops stormed the beaches of Guam near Agana.

After several hours of resistance by the U.S. garrison, CAPT George J. McMillan, the Naval Governor and the Garrison Commander, decided that the "situation was simply hopeless...resistance had been carried to the limit" and chose to surrender. As the prisoners of war were marched to the Catholic Cathedral, a chief petty officer and several other petty officers used the early morning darkness and confusion to escape into the jungle. Chief Aerographer's Mate Luther W. Jones would evade capture for nearly nine months.

Jones, a native of Jonesboro, Ark., enlisted in the Navy shortly after his 16th birthday, in 1926.

He completed "boot camp" at USNTS San Diego in May 1926 and received an Honorable Discharge Jan. 16, 1930.

Aug. 14, 1931, Jones reenlisted. During the next three years, he served in USS COLORADO. He was transferred to USNAS Lakehurst, N.J. in September 1934, where he attended Aerographers School (Primary – Class 11). After Pri-

mary school, he served in USS NEW MEXICO, USS CALIFORNIA and USS SARATOGA.

He attended Aerographers School (Advanced) at USNAS Pensacola from August to November 1939. He transferred to PATROL WING FIVE, and on April 19, 1940, he arrived at U.S. Naval Station Guam.

He was promoted to Chief Aerographer's Mate Jan. 28, 1941. At the time of the Japanese invasion, 8 December 1941, Jones was the senior Aerographer at the Navy Aerological Station, Guam.

Jones and two others survived in the jungle for nine months, but they were finally captured Sept. 12. They were interrogated and tortured for the next two days in an attempt to have them reveal the location of the other naval personnel still hiding on the island. All three men remained silent, and on the morning of Sept. 14, 1942, Jones and his two shipmates were forced to kneel before the pits they had dug and were beheaded by sword. His unmarked grave has never been discovered. ▲



Navy at Stennis Space Center brings early Christmas cheer to a Mississippi homeowner

by Cathy L. Willis, Naval Meteorology and Oceanography Command Assistant Public Affairs Officer

Greenery, gifts ... grout and gnat repellent? These aren't the traditional holiday trimmings, but then Christmas usually doesn't come in April.

Forty-one volunteers representing the four naval activities at Stennis Space Center, Miss., two partner schools and citizens of Bay St. Louis, Miss., brought a touch of early holiday cheer to area resident Gloria Lee on April 24. They were part of the day-long national home renovation blitz "Christmas in April."

The volunteer program annually assists elderly, disadvantaged and handicapped homeowners with basic house and lawn repairs. Area businesses and civic groups donate materials, tools and box lunches; while volunteer groups provide labor. The event always takes place the last Saturday in April. In addition to the Navy, four other community groups sponsored projects in Hancock County.

Gnats, not visions of sugarplums, danced around the Navy volunteers' heads as they scraped paint from the house exterior, raked leaves and broke ground for flowerbeds.

"The weather's a little humid, but at least it isn't raining," said project coordinator Becky Rotundo of the Naval Research Laboratory.

She tacked posterboards outlining the day's schedule and work assignments to an oak tree.

"After three years, I've learned the only way to get it all done in one day is to be organized from the get-go," she said.

For some, the event was a family affair. B.J. Dauro from the Commander, Naval Meteorology and Oceanography Command (CNMOC) headquarters, brought her teen-age children, Michael and Rachel. They were joined by several of their classmates from Our Lady Academy and St. Stanislaus College Prep, both Navy Personal Excellence Partnership Schools. The Dauro family worked in the yard all day even though Michael was scheduled to attend a school prom later that evening.

"We did this last year, too," B. J. said. "It's a good family activity that we find very rewarding. A little effort can make a big difference."

ENS Stu Brown, also of CNMOC, agreed, "This is a very satisfying way of spending a Saturday."

Brown and senior scientist Jack Tamul of the Naval Oceanographic Office replaced the home's kitchen ceiling.

"The postman won't recognize this place on Monday," Lee said as she admired the new landscaping around her mailbox. "I'm just tickled that so many people came out to help me today. It really does feel like Christmas."

Like most of the program's homeowners, Lee normally has no one to assist her with house upkeep and yardwork. Throughout the day, she pulled weeds and shared snippets of her home's history.

"My mother got those windows from the old St. Rose de Lima schoolhouse," she reminisced watching Tammy Townsend of NRL gingerly apply teal green paint to the window's frame and trim. St. Rose parishioners were among members of the work crew.

One job proved trickier than the rest — someone had to crawl under the house to shore up the kitchen floor.

"I'll go up on the roof, but I don't like to go under a house," said Rotundo, cautiously eyeing the narrow crawl space beneath the raised bungalow. "Things live under houses."

Wriggly critters in the dark posed no problem for Petty Officer Dallas Hill of Special Boat Unit-22's riverine unit; he routinely works in the murky waters of the Pearl River. He disappeared beneath the house with cinderblocks and emerged moments later, a little dirtier, but otherwise unscathed.

By sunset, the house sported new siding, a fresh coat of paint and a new ceiling in the kitchen. Potted ferns and begonias decorated the re-screened porch and a whitewashed yard swing dangled invitingly from the oak tree.

"The postman won't recognize this place on Monday," Lee said as she admired the new landscaping around her mailbox. "I'm just tickled that so many people came out to help me today. It really does feel like Christmas."

Naval organizations at Stennis Space Center have joined other Hancock County organizations in sponsoring "Christmas in April" projects for the past three years.

"We can always count on the Navy to do an organized, complete and professional job," said Carey Trapani, the county's Christmas in April chairman for 1999-2000. "They have a great group of talent." ▲

Electronic handbooks – fleet support at the speed of light

by Sam Brand, Naval Research Laboratory – Monterey; William Burnett, Naval Meteorology and Oceanography Command

Severe weather decision-making can be extremely challenging for the fleet operating in new port locations. For example, when faced with an approaching tropical cyclone, a timely decision regarding the necessity and method of evasion must be reached. In complex regions such as the Mediterranean, the wind systems challenge the most skilled ship captains. A number of "local" wind events, including the Mistral, Bora, Levante, etc., can quickly form and dissipate, leaving a multitude of different ocean wave patterns that can seriously damage ocean vessels.

For over 20 years, the Naval Meteorology and Oceanography Command has funded the Marine Meteorology Division of the Naval Research Laboratory in Monterey, Calif. to develop and distribute severe weather port guidance for the U.S. Navy. Tropical Cyclone Haven Studies, Mediterranean Severe Weather Port Studies, Hurricane Haven Studies, and Regional Severe Weather Guides have become important handbooks to the U.S. Navy and other national agencies.

By 1997, NRL Monterey was responsible for the creation or updating of over 200 ports worldwide. The work that goes into one port study is extensive, and the evaluation of the port requires rigorous data collection efforts and discussions with local port and meteorological officials. Studies include an in-depth description of the port and surrounding topography, a description of the harbor and facilities, climatological information, storm surge and wave action at the harbor, evasion rationale, and general conclusions concerning the harbor as a haven.

You can imagine that most ports where the fleet operates can hardly be considered "friendly." Foreign local port authorities usually ask a number of questions when NRL personnel arrive requesting information about the safety of their harbor. It is through the dedication and persistence of the NRL staff (and contractor support) that the best and most accurate information regarding port information is developed.

During the last 20 years, three large severe storm and port havens "handbooks" have been developed for the fleet. These books are usually five inches wide — one foot long, and wrapped in a heavy blue binder. New ports or port changes must be mailed out and included in the handbook every year, with new books reprinted every five years. Books can become outdated without regular care, and it can be quite

a task for NRL to ensure that everyone within the fleet's AOR is provided with the appropriate handbook.

Web to the rescue!!!

During the last year, CNMOC has funded NRL and Analysis & Technology (A&T, Inc.) to move the handbooks from their hard copy state to a soft copy state. The Tropical Cyclone Havens Handbook and the Hurricane Havens Handbook are located on the CNMOC Home Page <http://www.cnmoc.navy.mil>, and the information is open to the public. The Mediterranean Severe Storm Handbook is being digitized at NRL Monterey and will be available soon.

The result of digitizing the handbooks has been a very user-friendly, informative, and accessible product that the fleet can retrieve from either NIPRNET or SIPRNET. Port updates, while still taking time to develop as a study, can be delivered to the fleet more rapidly by updating only the homepage. Port information can be accessed by the click of a button with higher resolution graphics and the latest in information.

So, I am on a ship without web access. What do I do?

All the electronic port studies can be mailed to the fleet via CD-ROM. However, if you cannot read either the web address and do not have a CD-ROM driver, the books can still be printed out and mailed to you.

The requirements for new port evaluations are continuous and will ensure severe weather port studies are delivered for many years to come. For example, the Navy recently requested 147 ports be evaluated in the European region. Many are updates of previous studies, but most were new because of the ever-changing political scene in the European area. Navy ships are visiting many eastern European countries that, a few years ago, people thought would never be visited. The fleet's vulnerability to severe weather is still very real and significant, but the port haven handbooks will continue to ensure that their susceptibility during bad weather is reduced because they will be informed. ▲

Newest survey ship, T-AGS 64, is launched

The Navy rolled out its newest oceanographic survey ship, USNS BRUCE C. HEEZEN (T-AGS 64), in a christening ceremony on March 25 at Halter Marine Shipyard in Moss Point, Miss.

The event marked the first time in U.S. Naval history that a ship was named — not in the time-honored, traditional Navy manner — by a group of fifth-grade students.

Nine fifth-graders from Oak Lawn Elementary School in Cranston, R.I., won a national Navy contest to find the name for the new ship. The contest, sponsored by the Ocean-

ographer of the Navy and the Navy League of the United States, was tailored to encourage students to learn about the maritime sciences, naval oceanography, and use of the internet. The Rhode Island fifth-graders beat out nearly 2,000 other entries because of the breadth and

scope of their team project.

The new ship was named for oceanographer Bruce Heezen (pronounced HAY-zin), a marine scientist who did pioneering work in plate tectonics and who produced the famous Heezen-Tharp physiographic maps of all the major oceans of the world. Heezen died of natural causes in 1977 while diving in the Navy's deep submersible submarine NR1 during an exploration.

The ceremony's principal speaker, Jerry MacArthur Hultin, Under Secretary of the Navy, paid homage to Heezen's contributions, to the Rhode Island fifth graders and to the contributors to the program.

"I want to thank the Oceanographer of the Navy and Jack Kennedy of the Navy League, Admiral McKinney (RADM Henry McKinney) of the Navy Memorial, and the National Geographic for the tremendous support they provided to the nationwide contest," he said.

RADM Ken Barbor, commander of the Naval Meteorology and Oceanography Command, also thanked the Navy League for its sponsorship.

Navy League artist John Kaljee designed the poster for the competition, and the Navy League paid for the printing of the 120,000 posters that were distributed nationwide. In addition, the Navy League provided panels of judges who selected the 10 finalists in the contest. The Navy League, a private volunteer organization that serves the sea services, also helped plan the year-long contest.

Bruce C. Heezen will be the fifth ship in the Pathfinder T-AGS 60 class.

Hultin said Heezen, the man, was a true pioneer.

Heezen was "an explorer of the ocean's depths, a man who traveled the globe many times over, achieved many firsts and whose discoveries continue to benefit our Navy, our nation and the world," Hultin said.

He also paid tribute to the students who named the ship.

"To the students from Oaklawn, thank you for giving to us, to our nation, and to the world, a perfect name for a ship that will one day soon explore the oceans, capture data and yield answers to questions we have yet to ask," he said. "Through your actions, this ship will become a symbol of Bruce Heezen's passion for the ocean, his long-lasting contributions and his return, once again, down to the sea he so loved. And through this ship's actions you will always be linked to the sea." ▲

The new ship was named for oceanographer Bruce Heezen, a marine scientist who did pioneering work in plate tectonics and who produced the famous Heezen-Tharp physiographic maps of all the major oceans of the world.

Message from the Oceanographer of the Navy...

Oceanotes keep the community informed

Many of you have probably heard by now that I will leave the office of Oceanographer of the Navy in mid-July. You have a great community with a fascinating range of issues and a mission important to the Navy. I've very much enjoyed being a part of it, and I'm disappointed to be leaving after only a year.

There is good news, though. I'll be in the Pentagon, wearing two OPNAV hats (N89/Navy Special Programs and N873/Deep Submergence), and I'll remain a strong supporter of naval oceanography. Also, I've brought in an impressive new Technical Director, Dr. Richard Spinrad, who is already tackling some of the major challenges that we face. My relief, RADM Dick West, is coming from DoD's Ballistic Missile Defense Office, and he will take over in early July.

Dr. Richard Spinrad is the new Technical Director for the Oceanographer of the Navy

Dr. Richard W. Spinrad, a former division director at the Office of Naval Research, reported onboard as the new Technical Director to the Oceanographer of the Navy on March 1.

As technical director, Spinrad is responsible for the oversight of all Naval operational meteorology and oceanography, as well as geospatial information services, precise time and time interval, and astrometry.

He has been Executive Director for Research and Education at the Consortium for Oceanographic Research and Education (CORE) for the past four years.

At the Office of Naval Research, Spinrad served as the Navy's manager of optical oceanographic research. He then served as division head for the Ocean Biology/Optics/Chemistry Division, and following the re-organization of ONR in 1993, division director for the \$150 million Ocean Atmosphere and Space Modeling Prediction Division.

Spinrad earned a bachelor's degree at Johns Hopkins University. He earned a master's in physical oceanography and a Ph.D. in marine geology at Oregon State University. He has worked as a research scientist at Bigelow Laboratory for Ocean Sciences, and was the president of Sea Tech, Inc., a major manufacturer of oceanographic sensors. ▲

Let me just pass on a few efforts we've been involved in here in Washington lately that may affect you.

- Fine-Scale Weather Satellite Imagery for the Balkans
- The Budget Wars
- Reinvigoration of the GI&S in the 1800 Community
- METOC, Navy Space and NRO
- Navy-Air Force Cooperation in the 21st Century (NAVAF-21)
- NATO METOC
- Naval Oceanography Community Strategic Plan

Details of our ongoing efforts are available on the COMNAVMETOCOM web site at www.cnomc.navy.mil/nmosw/staff/oceanote.htm. ▲

West named to be the new Oceanographer of the Navy

RADM Richard "Dick" West has been named to replace RADM W.G. "Jerry" Ellis as Oceanographer of the Navy.

West is the deputy director for the Ballistic Missile Defense Organization in the Department of Defense.

He is a native of the Finger Lakes region of New York state and a graduate of the University of Rochester. He has master's degrees in management and national security.

West has served on several ships, homeported on both coasts and deployed to the Mediterranean, Pacific, and Persian Gulf numerous times. He served in Vietnam with the riverine forces and commanded ships during hostilities in the Persian Gulf.

He has commanded three ships, USS OPPORTUNE, USS MCINERNEY, and USS LEAHY.

Shore tours include COMOPTEVFOR, the Navy's independent operational testing organization; Deputy Chief of Staff for Operations CINCSOUTH Naples, Italy; and Commanding Officer Surface Warfare Officers School, Newport, R.I.

His personal awards and decorations include the Defense Distinguished Service Medal, the Defense Superior Service Medal, the Legion of Merit with three awards, Meritorious Service Medal, Navy Commendation Medal and various service and campaign medals. ▲

NEXRAD hotline wins vice president's 'Hammer Award'

by AGC(SW) Daniel T. Hoffman, Naval Oceanographic Office NEXRAD Component

The NEXRAD Doppler radar has been well received by the general public and has proven to be a vital forecasting tool in keeping the United States public aware of significant weather that could have an impact on their lives, businesses and property.

The Operation Support Facility (OSF) Weather Surveillance Radar 1988D Next Generation Radar (WSR-88D NEXRAD) hotline was awarded the Vice President Gore "Hammer Award" on March 4.

The award was based on the hotline's mission to place the customer first. The hotline supports 169 radar systems and up to 540 display systems that provide rapid and continuous radar data for weather forecasters in the Department of Defense, Department of Commerce, Department of Transportation and various contract vendor companies. The NEXRAD Doppler radar has been well received by the general public and has proven to be a vital forecasting tool in keeping the United States public aware of significant weather that could have an impact on their lives, businesses and property.

The Naval Oceanographic Office NEXRAD component's mission is to maintain direct liaison support and act as an expert technical advisor in the implementation and application of Navy/Marine Corps Principle User Processors (PUPs) deployed throughout the CNMOC community. The NEXRAD component is charged with assisting METOC sites in ensuring enhanced understanding of radar fundamentals, interpreting radar products, increasing the operational efficiency and maintenance of the PUP and its configuration, restoring system hardware, installing/removing communication lines/ports, and updating technical and operational documentation.

The component also is assigned to assist the OSF Hotline in calls from various other customers who are part of the Tri-Agency program. Collectively, the hotline can receive as many as 1,500 calls a month, during inclement weather, implementation of new software and documentation changes.

The NEXRAD Doppler radar was developed through a Tri-Agency Program to implement the radar throughout the United States and other sites in the Pacific, Caribbean and Atlantic. The National Weather Service's Operational Support Facility was given the responsibility of providing operational support as a means for centralized management, coordination and program control.

The NEXRAD Doppler Radar has turned out to be a complex system with an intricate set of algorithms that provide up to 77 high resolution radar data products at any given moment. It was determined early on in

the Tri-Agency program, that in order to make the NEXRAD Doppler more acceptable to the field end users and to provide increased technical assistance, an organization would have to provide answers to questions from the field on the NEXRAD and its products.

This is where the OSF Hotline came into being. It is made up of 12 Electronics Technicians and 10 Operation's Specialists. The hotline operates 24 hours a day and seven days a week and provides support for any customer who uses the system.

The NEXRAD Doppler has proven to be a significant forecast tool that has enhanced weather forecasters' ability to detect severe weather and properly warn the public. As all weather forecasters know, providing accurate and timely forecasts is an immense responsibility. The Doppler radar was deployed throughout the contiguous United States in order to allow for as much radar coverage as possible.

And thanks to the OSF NEXRAD Hotline, when a system goes down for any reason, an Operation's Specialist and an Electronics Technician are immediately available to determine the extent of the problem and to bring the system back on line as fast as possible.

The hotline also holds external and internal customers in very high regard and is responsive to customer requests for change to documentation, hardware, software, and products. It is the job of the hotline to act as the first level of support to do the research.

Occasionally, various users of the system in the Tri-Agency have questions or concerns and need to get information that they can not get anywhere else.

The Doppler radar is a constantly evolving system. The latest development allows it to migrate toward an open communications architecture, which also utilizes COTS (Commercial Off-the-Shelf) computers. The new system, termed Open System Architecture, allows the Tri-Agency greater access to radar data more rapidly. This will also allow for the increased application of radar data in myriad ways at each site. ▲

Predicting the Mistral with the newest models

by Ron Picard, FNMOC; and Lt. Cdr. Jim HUNT, Royal Navy

In the Provence region of France, the locals have invented names for even the slightest of breezes.

There are different names for winds that blow from the same direction yet only their force or temperature permits identification. In Marseilles for instance they "know" more than 30 different winds. Sometimes the same wind has different names. In Languedoc and Roussillon, the northerly cold wind that descends the Rhone Valley is called the "tramontane" but elsewhere it's known as the "Mistral."

Characterized by wind funneling through the gaps in several mountain ranges between the Alps and the Pyrenees, Mistras are common during winter and spring, although they can occur year-round. In winter, wind speeds can reach over 100 km/hr (60 mph) off the southern coast of France, and in Marseille, the Mistral blows on an average of 100 days per year.

There's a story that says the old Napoleon law excused "crimes of passion" committed when the Mistral had been blowing for over three days. If you have ever seen the tiny mountain villages of 10 or 20 stone houses and can imagine what it would be like isolated there a 100 years ago during days-long Mistral events, you can understand how this story could be true.

The U.S. Navy's interest in the Mistral lies not in Napoleonic law but in the fact that the Mistral is considered the most dangerous of all Mediterranean winds. The effects of its gale force winds can extend into the western and central Mediterranean and generate heavy seas, an obvious concern for shipping.

The Mistral may blow for several days at a time and extend through the atmosphere to heights of 3km (two miles), a consideration for aviators.

At sea level it chills the ocean's surface temperature, pushing surface water seaward, thereby creating upwelling and a complex ocean structure; perhaps influencing submarine operations.

Thus, the Mistral is a formidable phenomenon affecting all aspects of naval operations.

In the past both global- and regional-scale models usually captured the onset and duration of the Mistral. But in

today's new world of mesoscale models, forecasters are learning to use the Navy's state-of-the-art, high resolution, locatable, triple-nested, regional model, COAMPS-Europe, to not only predict the onset and duration of the Mistral but to forecast the geographic extent as well.

On Feb. 3 forecasters noted that the synoptic conditions were ripe for a Mistral event. An intense anticyclone with strong northerly winds on its eastern edge was pushing its way into Western Europe. The winds dammed up along the Alps and Pyrrennes and following the path of least resistance, tumbled down the Rhone Valley.

In the following model runs, COAMPS-Europe began increasing the severity of the Mistral, forecasting winds near 20 m/sec (40 kts) within 42 hours. The 24-hour surface

prognosis from the Feb. 4 1200Z, 27 km model run (valid Feb. 5, 1200Z) forecast winds of 25 m/sec (50 kts) with the center just south of Provence and a band of 10 m/sec winds extending into the Strait of Bonifacio. An associated wind belt of 15 m/sec (30 kts) extends

south of Sardinia toward the central Mediterranean. Of particular interest is the geometrical extent of the phenomenon.

The COAMPS-Europe analysis for Feb. 5, 1200Z verifies the 25 m/sec (50 kts) wind center along with the wind-belt structures through the Strait of Bonifacio and south of the island of Sardinia. Note the 30-kt. wind observation report near Toulon, France. However, the 15 m/sec surface wind forecast south of Sardinia was over-forecast by 5 m/sec.

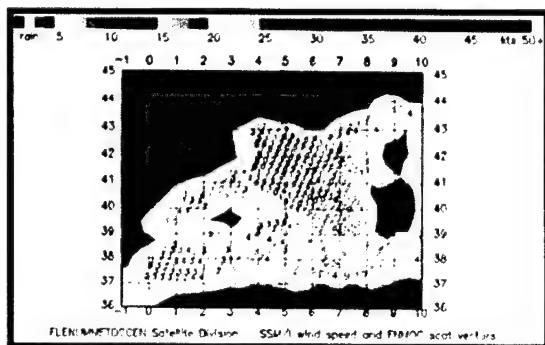
An amazing feature is COAMPS' capturing the geometric extent of the Mistral at 27 km resolution. This positive model tendency of COAMPS, the ability to near perfectly delineate a wind field, has been seen in all COAMPS regions.

The accompanying SSM/I data, verifying at Feb. 5, 0917Z, depicts winds to 47 kts in the area of interest. SSM/I also shows a line of 20 kts winds south of Sardinia but fails to show a wind belt through the Strait of Bonifacio. This lack of wind through the strait could be a result of the time of day the data was obtained or the masking of the wind

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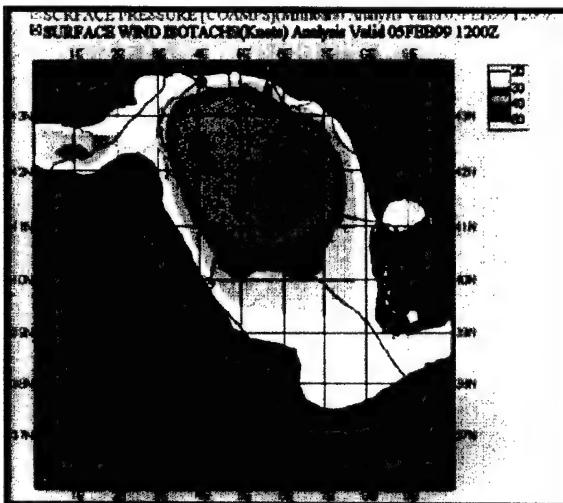


Special Sensor Microwave Imagery (SSM/I) valid 05FEB99 0917Z.

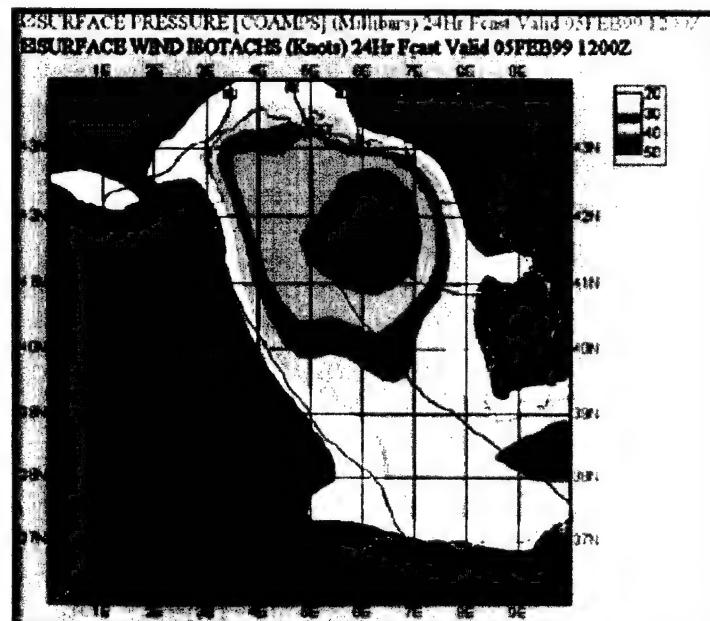
field by the land table associated with the 25-km resolution of the SSM/I sensor. Again, the extent of the Mistral in the SSM/I agrees very well with both the COAMPS-Europe analysis and 24-hour forecast.

The use of mesoscale modeling in real-world forecasting is relatively new. Forecasters have years of experience analyzing on the synoptic scale. Only recently have meteorologists been given the opportunity to use mesoscale model output for their forecasts. As can be seen with the Mistral event, mesoscale model output is a fantastic new development that will aid in providing forecasting solutions to military-related weather problems.

Taming the Mistral is unrealistic, but gaining a better understanding of the event aids in warning of its onset, duration and extent. Like Napoleon who sought to reduce its effect by excusing "crimes of passion" committed during a Mistral, we seek to reduce its effect on naval operations. Perhaps we can take away some of the sting of this legendary Mediterranean wind. ▲



Surface pressure and wind isotach 05FEB99 1200Z analysis from COAMPS-EUROPE.



Surface pressure and wind isotach 04FEB99 1200Z 24 hr forecast from COAMPS-EUROPE, valid 05FEB99 1200Z.

FNMOC/NRL Monterey model evaluation team always on the job to improve operational capability

by Lt. Cdr. Jim Hunt, Royal Navy

The Fleet Numerical Meteorology and Oceanography Center/Naval Research Laboratory Monterey Model Evaluation Team has been in existence in various forms since the late 1970s. Although the models and technology have changed significantly over the intervening years, the aim has remained more or less intact: To evaluate and verify the operational atmospheric models run at FNMOC in order to improve operational capability.

The obvious aim for all environmental models is to improve model physics and methodologies in order to attain a completely accurate forecast. However, we must be realistic; the model forecast will contain error, but sustained and methodical analysis makes it apparent that many errors exhibit some form of bias. For operational purposes it is imperative that forecasters are aware of these biases and are able to account for them.

Many forecasters apply "tendencies" on a regular basis. In addition, the biases may be a relatively severe shortcoming within the model. Such occurrences can be discussed with the modelers. Hopefully, with research and testing, the appropriate modifications can be made to improve the model. It is for this operational role that model evaluation and verification is an important part of model development at FNMOC.

How the team functions

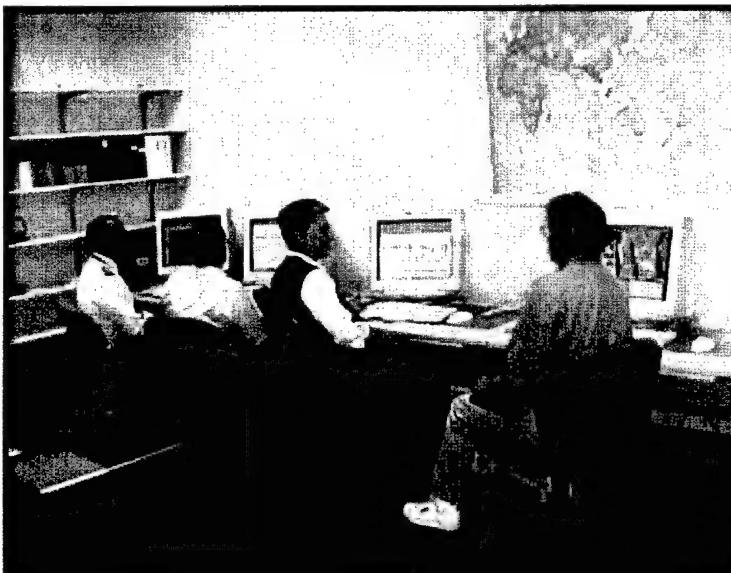
The team consists of personnel from various departments within FNMOC and NRL Monterey. The interested parties converge on a daily basis in the Models and Data Lab in order to discuss various attributes of the models. Invariably, the discus-

sions are centered on the skill of the model forecasts. With the recent introduction of the Coupled Ocean/Atmosphere Mesoscale Prediction System (COAMPS) the majority of the meeting is spent evaluating products generated by this model.

At any given meeting a typical suite of products used for analysis, comparison and discussion is as follows:

- Mean Sea Level Pressure
- Surface Observations
- 2m Air Temperature
- SSM/I Wind Speed
- 10m Wind Velocity (Speed and Direction)
- SSM/I Rainfall Rate
- 500mb Height
- Scatterometer Data
- Sea Surface Temperature Analysis
- IR/VIS SatPics

Forecast charts, analysis charts and various types of observational data for a common valid time or as near as possible are compared for all COAMPS areas. Any discrepancies are verified and noted and in due course, a recurring discrepancy becomes a tendency. Major and unusual discrepancies are also noted and relayed to the modelers for explanation and, if practicable, further research. The team members also apply their experience and knowledge in discussing any discrepancies in order to highlight possible reasons for their existence. However, the final aim is to advertise tendencies to assist forecasters in product evaluation.



The FNMOC/NRL Monterey Model Evaluation Team perusing and discussing model skill, (L-R) Lt. Cdr. Jim Hunt RN (PEP Officer, 300 Dept. Models Liaison), Bob Godfrey (meteorologist, NRL), Dr. Jan Hwa Chu (meteorologist, NRL) and Ron Picard (400 Dept. physical meteorologist). Not pictured is AG2 Cynthia Blair (300 Dept. QA/QC cell).

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An additional role of the team is to perform precursory evaluation of new model areas for COAMPS. Prior to implementation as part of the FNMOC operations run, products from a new COAMPS area, in Beta-Testing form, are made available for stability and accuracy assessment. This has been done for all COAMPS standard areas and for exercise areas, e.g., Tandem Thrust 99.

Operational customers have highlighted many instances of accurate and erroneous occurrences within the model and feedback of this nature assists the Model Evaluation Team greatly.

The need for feedback

A gratefully received and highly valued source of information that can have a great influence on the daily model evaluation procedures is "user feedback." The whole team is aware that feedback from users located in the midst of the model domain, experiencing or not what the models predict is a prized commodity, especially if received in a timely manner.

In the case of discrepancies, feedback allows the team to look in detail at the phenomenon and discuss any issues raised with the modelers. This has the express aim of improving the model and of informing forecasters of any findings that are a consequence of the feedback.

A recent and excellent example occurred in the new West Atlantic COAMPS area. It was noted concurrently by NLMOC forecasters and the Evaluation Team that a relatively deep and potentially troublesome low-pressure system was forecast to develop in the Atlantic off Florida. Although present in this COAMPS area, it was only represented as a relatively weak trough in the COAMPS Central America area and in the global models (NOGAPS/AVN/MRF).

Indeed, this low proved to be spurious although there are several possible reasons for its occurrence. The Model Evaluation Team has observed similar low-pressure systems in several other COAMPS areas, which we call data-point lows. On discussion with the modelers, these features can arise from either bad data, marginal data or simply as a consequence of a poor first-guess field in the early stages of the model run.

As you can see, we value feedback! It assists the team members in locating potential strengths and weaknesses of the models and highlighting tendencies that can only aid the forecaster in the field. Feedback can be sent via the FNMOC web pages or by e-mailing Lt. Cdr. Jim Hunt directly at huntj@fnmoc.navy.mil. COAMPS tendencies are located on the Fleet Numerical homepage under Product Info/Model Characteristics/COAMPS. ▲

Tropical Storm Frances impacts the south Texas coastal bend

by AG2 John J. Meyer, Naval Training Meteorology and Oceanography Detachment, Corpus Christi

Born in the Gulf of Mexico on Sept. 8, the sixth tropical cyclone of the 1998 hurricane season, Frances, was initially forecast to make landfall as a tropical storm between Brownsville, Texas, and Corpus Christi, Texas, on Sept. 10. Expecting destructive force winds possible within 48 hours, RADM Mike Bucchi, Chief of Naval Air Training, set Tropical Cyclone Condition of Readiness (COR) 3 for all installations along the Texas coast at 1600 on Sept. 8.

Upgraded to a tropical storm on Sept. 9, Frances was still forecast to make landfall south of Corpus Christi. With the brunt of the storm expected to impact Naval Air Station (NAS) Corpus Christi, base officials decided to hangar all aircraft for the duration of the storm. After nearly 150 aircraft were strategically placed in base hangars, the decision was made to hurrevac the remaining planes to safety. With conditions rapidly deteriorating by 1700 on Sept. 10, AG1 John J. Meyer and AGCS(AW) Nancy McHale successfully briefed over 30 flight crews enroute to various stations around the United States.

Near midnight on Sept. 10, Tropical Storm Frances turned northwestward and made landfall just north of Aransas Pass, Texas or approximately 60 miles northeast of NAS Corpus Christi. The maximum wind gust recorded by Naval Training Meteorology and Oceanography Detachment personnel was 42 knots, with just over three inches of precipitation accumulating throughout the duration of the storm.

Even though the storm passed well north of NAS Corpus Christi, the base suffered over \$600,000 damage to piers, roads, and runway approach lights. Fortunately, there were no facilities or aircraft damaged, no injuries, and very limited property damage.

At approximately 0700 on Sept. 11, Bucchi secured COR 3 and South Texas installations returned to COR 5. ▲

March microburst event causes damage, cancels air show at NAS Corpus Christi

by AG2 Kirk S. Sullivan

During the early morning hours of 28 March, a microburst event with winds over 100 knots roared through Naval Air Station (NAS) Corpus Christi, Texas. Doppler Radar revealed a bow echo feature and six tornado vortex signatures (TVS) accompanying severe thunderstorms which resulted in the cancellation of the second day of the 1999 Blue Angels South Texas Shootout and produced over \$5 million in damages throughout the base.

A week prior to the event, AG2 Kirk S. Sullivan, a Forecast Duty Officer (FDO) at the Naval Training Meteorology and Oceanography Detachment (NAVTRAMETOC DET), initiated a special duty forecast for base and air show officials. Each of Petty Officer Sullivan's forecasts predicted severe thunderstorms on station sometime during the air show. On Saturday morning, thunderstorms were expected on station beginning near midnight and lasting until noon on Sunday.

Immediately after Saturday's air show, steps were taken by base operations personnel to limit possible damage to both training aircraft and aircraft participating in the air show. Military and civilian aircraft, including vintage aircraft from the Texas Confederate Air Force of Conroe, Texas were hangared in base facilities.

At approximately 2100L, the NAS Executive Officer was briefed by Mr. Richard W. Stegall, Duty FDO, that severe thunderstorms with tops up to 45,000 feet, damaging winds up to 50 knots, and hail $\frac{1}{2}$ to 1 inch, were expected on station. The Executive Officer immediately ordered the sheltering of as many remaining aircraft as possible. Due to space limitations, some aircraft could not be hangared and were damaged.

The edge of the line of thunderstorms reached the airfield between 2300 and 2400L. Although the maximum wind gust recorded was 59 knots, a review of all available data indicated that a microburst event with classic starburst

pattern occurred over the northern end of the runway with winds estimated at more than 100 knots. The NEXRAD indicated a Tornado Vortex Signature (TVS) and mesocyclone signature at about the same time the microburst occurred. Coincident with the microburst, damage patterns to telephone poles, carnival rides and trees, indicated straight line winds caused this damage. All were felled in the same direction throughout the base. Likewise, the aircraft and hangars located along the flightline all received their damage on the windward side as if the wind had come from the same direction.

Despite all the early preparations, damage to NAS property and facilities were estimated at \$4.8 million with damage sustained by training and air show aircraft exceeding \$50,000. Each of 10 hangars, a warehouse, the Naval Exchange tailor and auto hobby shops and the gymnasium sustained 30 to 40 percent damage to the roofs.

Downed trees and telephone poles, scattered debris and missing street signs were experienced across the base. A small carnival on board for air show festivities was nearly destroyed, with damages totaling \$500,000. On the flightline, A Cessna 210 was flipped inverted, a U.S. Air Force (USAF) C-17 was struck by lightning, and a U.S. Coast Guard (USCG) C131 sustained rudder and tail damage after it was tipped back onto its tail. Additional damage to military aircraft:

- 36 USN T-34s with rudder damage, 1 T-34 with a tent pole through its elevator
- 1 USN T-44 with damage from chair striking its aileron
- 1 USAF T-37 with damage to its aileron and elevator from flying debris.

The NAVTRAMETOC DET staff did an excellent job alerting the appropriate personnel to impending severe weather well in advance and undoubtedly prevented more extensive damage to property or injury to personnel. ▲

IRTSS — giving pilots a 'sneak preview' of targets

by LT Duncan Young, Officer-In-Charge, Naval Pacific Meteorology and Oceanography Detachment Lemoore

The pilot is confident as he maneuvers his F/A-18 over Southern Iraq. This should be a milk run.

Every mission-planning step told him so. The weather guys were calling for clear and a million; the target should be right out in the open. It should be easy to use the Forward Looking InfraRed (FLIR) sensor to pick out the Scud launcher from the desert background and destroy it.

But confusion sets in as the pilot approaches the target area. The dune ridge north of the target appears out of place. There is a small grove of trees that he wasn't expecting. And to top it off, the atmosphere has cooled off slower than forecast, greatly decreasing the amount of thermal contrast between the target and the background. Unable to locate the exact target position relative to the surrounding geographic features, the pilot makes his best guess, releases his weapons... and misses the Scud launcher by 400 yards.

Positive identification of target location is absolutely vital to the success of strike missions. It is also one of the most difficult tasks a pilot has, especially given the influence of environmental effects on FLIR sensor performance. Fortunately, there is new tool to help.

Infra-Red Target Scene Simulation Software (IRTSS), currently under development by the Weather Impact Decision Aids program of the Air Force Research Laboratory, produces "through the sensor" FLIR scene visualizations aimed at helping pilots locate targets in the context of broad geographic features. Best of all, it can model the effects of real-time weather and time of day into the visualization.

Existing products such as EOTDA deal in the quantitative — At what numerical distance can I see the target? IRTSS deals in the qualitative — What will the target look like when I see it? A picture is indeed worth a thousand words or in this case, a thousand lines of EOTDA output.

For the past nine months, IRTSS has been used in a test-and-evaluation status at both Naval Pacific Meteorology and Oceanography Detachment Fallon and Naval Pacific Meteorology and Oceanography Detachment Lemoore. Strike fighter pilots at both locations have been ecstatic about the

A picture is indeed worth a thousand words or in this case, a thousand lines of EOTDA output.

product. Many of the techniques that pilots use for target-scene visualization are rudimentary, consisting only of the pilot's making a sketch of what he expects the target will look like from a given altitude and distance.

IRTSS automates and improves on this process. Systems developers start with a LANDSAT image of an area of interest. To prepare it for use in thermal models, a process of multi-spectral classification is used to assign surface parameters (i.e. concrete, grass, deciduous tree) to every pixel on the image.

Since IRTSS is run across the internet, users need only access the analyzed image and "click" on the location of the desired target. After choosing the target type (a "target builder" is under development that will allow "on the fly" creation of customized targets), users enter real-time weather data (past obs to initialize the thermal model and a TAF for expected weather) and initiate the model run. Once the run is completed (a 10- to 15-minute process) the target scene, an actual predicted visualization of the target area, can be rendered from any number of mission profiles.

A pilot is able to see, not just imagine, the location of the hangars relative to the runway. Real-time weather (which was clear and free of precipitation) and time-of-day effects are accurately represented in the contrast between target and background.

So what is the future of IRTSS? As with any tactical decision aid, the jump must inevitably be made from the lab and the test site to the operational platform. So bringing the capability to carrier OA divisions in forward-deployed battle groups is the implicit and eventual goal. There are many challenges to making this happen, including hardware issues and the creation of analyzed imagery data sets for areas of real-world interest. Meanwhile, testing and efforts to gather pilot feedback will continue at both Fallon and Lemoore. ▲

NPMOC/JTWC: Providing the weather forecasts the way the customer wants it

by AG3 Alexander Ladue

The Naval Pacific Meteorology and Oceanography Center/Joint Typhoon Warning Center (NPMOC/JTWC) has long been a leader in providing weather services to the local area and Pacific Fleet.

Nearly four years ago, the weather center began using the internet to supply its customers with data. In 1996, when NPMOC/JTWC first came on-line, the Non-Classified Internet Protocol Network (NIPRNET) was a service of convenience limited to those fleet units that had access to the internet. Now NIPRNET and SIPRNET (Secret Internet Protocol Network) are primary means of providing services to most of NPMOC/JTWC customers, 24-hours-a-day, seven days a week.

Today NPMOC/JTWC is using that same technology to take its customer support to a whole new level. After research of several successful institutions that supported the information needs of their customers via the internet, NPMOC/JTWC began looking at how it could better support its own customers.

A research team, headed by LT Christopher Stack of the command's Technology Services Department, worked with contractors from Lockheed-Martin to develop a process for allowing customers the ability to construct their own unique package of weather products and tie that package to a user-name and password. Simply put, a customer can select products he uses or needs on a regular basis and place the products into an archived profile that the customer himself develops.

All that is required is for the customer to access NPMOC/JTWC's NIPRNET website via www.npmoc.navy.mil. Once on the homepage,

directions are clearly defined. The entire process only takes minutes after the customer registers at the site . . . free of charge, of course.

While the information super highway can be an easy way to access data, it sometimes can be a complex place to input data. So, in the process of developing this new feature on the homepage, NPMOC/JTWC personnel also took time for training.

Selected members of the command received UNIX Systems Administrator Training from the Computer Training Academy, based in Hawaii. They learned various ways to improve and manage the web site and received extensive training on how to properly secure a web server. As with most military internet sites, the command has to consider possible security problems when posting information.

Information currently provided on NPMOC/JTWC's web page includes Hawaiian local weather observations and forecasts, weather satellite pictures for the Eastern and Western Pacific, solar/lunar and tidal data for the year, surf forecast for Oahu, active tropical cyclone warnings, and severe-weather warnings for the Pacific Ocean. The web page also has a listing of other weather links, which can take a person all over the world in search of a weather forecast.

So, the next time you need a weather forecast for Hawaii or somewhere else in the Pacific, and you have a computer, why not check out the Naval Pacific Meteorology and Oceanography Center/Joint Typhoon Warning Center's homepage at <http://www.npmoc.navy.mil>? In fact, why not go one step further and use our homepage to customize your own weather page? ▲

NEMOD Souda Bay is now online with SRF

by AGC(AW/SW) Jeffrey A. Stanke

In February 1999, Naval European Meteorology and Oceanography Detachment Souda Bay, Greece, converted the traditional 24-hour forecast watch to sub-regional forecast, support provided by Aviation Weather Division at Naval European Meteorology and Oceanography Center.

The initial phase of the change was having two of the four NEMOC Aviation Forecast Duty Officers spend three to four weeks TAD at NEMOD Souda Bay to train as future Sub-Regional Forecast Duty Officers (SRFDO).

While onboard, AG1 Thomas Delio and AG1 Jim Hatch became familiar with the weather pattern peculiarities of Crete and the central Mediterranean while qualifying as NEMOD Souda Bay FDOs.

As part of their support they provided weather products for transient ships and aircraft as well as the permanently based VQ-2 detachment at Naval Support Activity, Souda Bay.

Because of the Souda harbor orientation and the local topography, wind forecasting is critical for ships whether steaming in and out of the harbor or moored pier side. Funneling due to the mountain ridges on either side of the bay can cause extremely strong winds in certain conditions. Nu-

merous dynamic weather systems passed through the area during Delio's and Hatch's qualification giving them a first-hand view of the indigenous Souda Bay wind patterns.

Delio and Hatch tested and flexed their forecasting skills as the systems moved through, but the NEMOD FDOs and future SRFDOs worked diligently and successfully met the challenge.

The next phase was to integrate the actual weather support from NEMOC. After MOAs and SOPs were written, chopped, rewritten, finalized and endorsed, everyone was clear on their duties, and Sub-Regional Forecasting went into effect on Feb. 15. The operation was a complete success. The transition was very smooth, with NEMOC's providing outstanding coverage for smallcraft, high wind and thunderstorm warnings, TAFs and DD 175-1 support between the hours of 2200 and 0500.

Sub-Regional Forecasting is not only an operational success it also improves the quality of life for the Sailors at Souda Bay. The FDOs have been continually in a three-section watchbill, working 24 hours per watch. With SRF, FDO watch hours are eased, and the forecasters can enjoy a little bit more liberty time. ▲

Naples seeing quality of life improvements

by AG2 C.A. Feldman

The Naples Improvement Initiative has been rumored to be the largest Quality of Life improvement in Europe.

This \$500 million project is surely living up to its reputation. Approximately 10 years ago the Naval Support Activity was shaken by a substantial earthquake. The resulting damage and costly repairs showed that the U.S. Navy was in desperate need of new facilities.

A determination was made to build the operational aspect of the community in Capodichino, where Naval European Meteorology and Oceanography Detachment Naples is located. In addition, a support site would be built 15 miles north of Capodichino in Gricignano, which would consist of a Navy exchange/commissary, housing, schools, medical and more.

Construction began at the Support Site in February 1996. The first of four phases consisted of the completion of over 700 housing units and a Department of Defense Dependents' elementary and high school, which happens to boast the largest DoD gym in Europe.

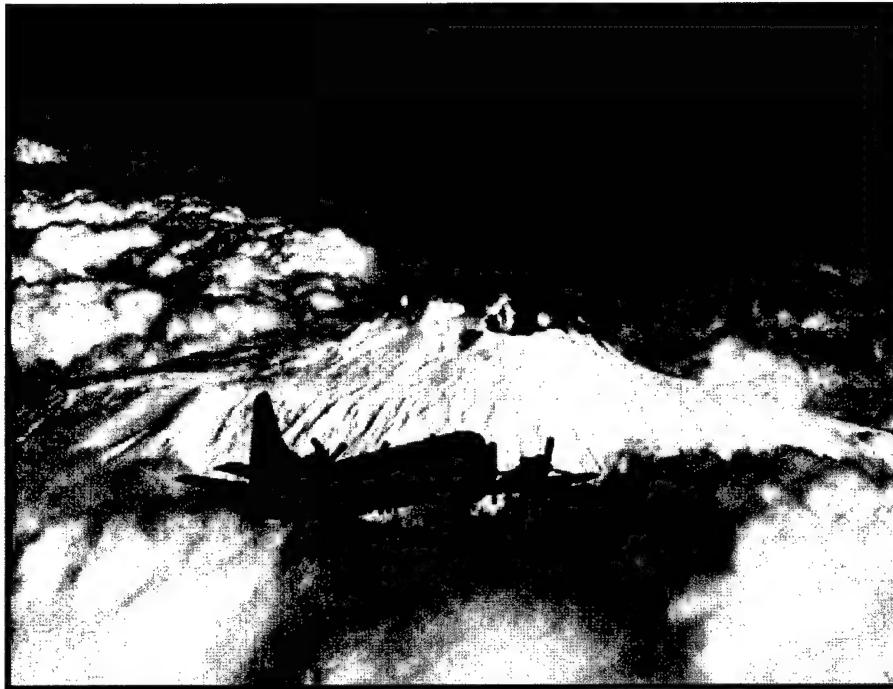
Meanwhile, Capodichino has quickly developed into an impressive college campus-type facility. The new NEX outlet, Capo Landing restaurant, gym, MWR club, dispensary and Burger King are within a five-minute walk from the four-story parking garages at both ends of the base.

Changes for the Naval European Meteorology and Oceanography Detachment are not far behind. Work has already begun on a two-story, 176-square-meter interim facility with an estimated completion date of April 12. This structure will house both operations and NEMOD so that we can continue to provide METOC support while awaiting the completion of our new office spaces in a new air terminal, scheduled to be finished by January 2001.

Full transition from Agnano to the Support Site and Capodichino is anticipated for late 2001 to early 2002. Seeing these improvements in the quality of life, with three additional phases yet to be completed, one can't help but feel fortunate to be stationed here or excited about a future tour in Naples, Italy. ▲

NEMOD Sigonella providing METOC support for new AIP P-3C aircraft operating in the Mediterranean

by LCDR Gary Scanlon, Officer in Charge, Naval European Meteorology and Oceanography Detachment Sigonella



AIP P-3C flies over Mount Etna shrouded in clouds.

Patrol Squadron TEN has begun a deployment to the Mediterranean as Patron Sigonella. While in the Mediterranean, the "Red Lancers" will conduct the usual ASW and ASUW operations and exercises.

However, they also will be engaged, in part, in reconnaissance flights over Bosnia-Herzegovina and Kosovo in support of NATO Operation Allied Force and in sea surface surveillance.

This deployment will be a little different because it has some powerful assets in addition to the already capable P3-C. VP-10 brought with them several upgraded P3-C aircraft dubbed the AIP P-3C. AIP refers to the Anti-Surface Warfare Improvement Program.

The P-3C aircraft were stripped then rebuilt/refitted with the AIP improvements all "hard-wired" and integrated. The result is an aircraft with a suite of new and sophisticated electro-optical systems and weapons systems.

The new SLAM capability and SAR/ISAR improvements may, however, be the most formidable developments in the AIP package. SLAM is a critical addition to the P-3's already impressive array of weapons and is paramount to the AIP P3-C as an offensive platform, making it a true all weather ASW aircraft.

Forecasting environmental parameters in support of the AIP P3-C has improved also to give even more punch to the platform. COAMPS Mediterranean 27km resolution fields and special area COAMPS 9km resolution fields are employed to develop tailored products for the AIP P-3C missions. Not only are ASW acoustic packets, IREPS and EOTDA products required but also strike forecasts for coastal targets and detailed target weather with emphasis on IR and optical degradation. Having flown recently with VP-10, I can say that the capabilities of the AIP aircraft are impressive. ▲

by CAPT Rob Lawson, 1800 Detailer

Boards

It has been a fast and furious promotion board season with the new EMPRS system and the continual inflow of officers into the Millington area. We wish to thank all of the members, recorders and assistant recorders who have made the effort to participate in the selection board process.

06 List in record time

Congratulations to our newest captain selects: CAPT(S) Wright, Grandau, Toll, Gillard, Smolinski, Green and Bacon. The competition was tough this year, and we had an outstanding zone of candidates.

The promotion list sure came out quickly this year as compared to previous years. Was it a fluke or by design?

On 10 February 1999 SECNAV directed the CNO to review selection board processing for promotions to 06 and below. One outcome of this memorandum was a significantly streamlined review timetable. In years past, the list was held until NCIS and the Navy IG had screened and resolved the list for all cases of misconduct. This review process could take months to adjudicate.

Under the new screening process, those officers shown to have significant misconduct will be removed from the nomination package and are reported separately to SECNAV. As those officers' cases are resolved, they are either returned to the principal list or removed from further consideration. This allows the remainder of the list to move quickly through the review process. The intent is to have the list on the street 83 days after the board concludes.

Homepage

Our page continues to grow and supply more information to you, the customer. Please take an in-depth look and see what we have added. The FAQ section continues to be a big hit, and we will continue to add to it. There are also numerous links worth checking out. Before calling us, take a look for that address, phone number or question about promotions. You may be surprised to find that the answer is already there.

Email

Paul and I are constantly looking for ways to streamline our management of records and personnel information in the office. With that in mind, please ensure you put your last name on the subject line of all email you send to us (Subj: Stewart — What's Next?). This will allow us to pass your

emails back and forth without losing sight of who authored the original message and improve filing of those messages in your respective folders.

Detailing visits and plans

I recently completed a detailing trip to WESTPAC and participated in the closing of our center in Guam and the establishment of our new center in Yokosuka. Although it was sad to see our command in Guam close, our new center in Yokosuka has risen to the challenge and is working hard to provide improved support to COMSEVENTHFLT.

Our recent trips have also included stops in Hawaii, Monterey, Norfolk, D.C., and Annapolis. Due to our remote location away from the fleet, it is very important that you schedule time with us when we come to your location. See our homepage for our upcoming travel plans and stay in touch.

Welcome to our newest officers

We extend a warm welcome and congratulations to our community's newest members. ENS Nicole Nollette, ENS Fernando Navarro, LT Jake Guerrero, ENS Keir Stahlhut, LT William Sommer, LTJG Joanna Kroll, LTJG Jonathan Vorrath, LTJG Mike Barna, LTJG Marn Balolong, LTJG Rob Crofoot, LTJG Karen Wingeart, LTJG Anna Bryant, and LTJG Tracey Delk. Welcome Aboard!

TIG/TIS to retire

Guidance is expected from SECNAV soon that will continue the current Navy policy of allowing 05/06 officers to retire with two years Time in Grade (TIG) through fiscal year 2001. After FY01, the TIG requirement is expected to revert back to three years. Additionally, the minimum commissioned service for voluntary retirement as an officer will remain at eight years until the end of FY01 when it will revert back to 10 years. Our LDOs contemplating retirement need to be aware of this policy. Other force-shaping tools that are expected to be continued through FY01 include Temporary Early Retirement Authority (TERA) and Selective Early Retirement (SER).

Hot fills

The homepage continues to be the best and most up-to-date information for Hot Fills. We update it as needed; call if you have any questions. ▲

training

NTTU gets accreditation from Atlanta-based group

The Naval Technical Training Unit at Keesler Air Force Base has been accredited by the Commission of the Council on Occupational Education.

The accreditation is based on the commission's quality standards as well as the unit's ability to meet the needs of the students, the community and the employers.

The commission's evaluation process includes an extensive self-study by the institution and an intensive review by a visiting team of professional educators representing the commission's member institutions from other states.

Keesler Technical Training Unit began its self-study in July 1997 and underwent a team visit in September.

The Atlanta-based Council on Occupational Education, organized as a non-profit corporation, offers quality assurance services to post-secondary workforce education providers across the nation. The council's mission is to assure quality and integrity in career and workforce development. Services include institutional accreditation (recognized by the U.S. Department of Education), program quality reviews for states and workforce education providers, and information services. ▲

people & places

Sailor rescues couple after transformer explosion

When he saw the flash and heard the explosion on March 6, LT Carlo Lombardo of USS SIAPAN didn't know whether it was an explosion or a lightning strike or both.

Either way he thought someone may need his help.

"We were about a half-mile from the explosions. As I approached the accident scene, I watched four or five other vehicles drive past. I was shocked and appalled since I could hear a woman call for help," he said.

Then he saw a vehicle off the road topped by a transformer. A power pole was rocking back and forth, and the line was waving up and down as the broken section of the pole swayed in the dark.

"As I hopped out of my truck I could hear the pop of electricity. I ran back to the vehicle and had to high step through the wires on the road," he said.

A young woman was standing in the drainage ditch on the passenger side with the door open, and a man was in the vehicle, obviously hurt.

"I realized that the man had gone head-first through the windshield. He was moving and conscious but covered in blood."

An off-duty sheriff helped the woman out of the ditch and to a safer location near the road. But the man needed more help.

"The power line was still wobbling back and forth within about 18 inches of my head. The man kept saying, "I know, we need to get out of here," then he would lean back in his seat and try to light a cigarette."

With the help of the off-duty sheriff, he convinced the injured man to get out of the vehicle. Help arrived and Lombardo left.

"The interesting thing about this event was that in the last 8 1/2 to nine years, this is the third time I have been the only vehicle to stop at the scene of a single-vehicle accident. All involved injuries; one was a fatality. That was another incredibly bloody scene, and the one that convinced me to always carry rubber surgical gloves in my Bronco. I also keep a blanket with me — I have learned that you never know when you might have a need for either one or the other." ▲

Promotions

The following are the new Senior Chief Aerographer's Mates:
Gerald Cappeller, James Clontz, Gerald Doolittle, James Uncapher,
Stephen Chetsas, Arthur Deicke, Sandra Sprenger, Susan Womack.

Broadcast meteorologist uses Navy products

Through WAVY-NEWS 10, Navy METOC products are getting noticed by more people than ever previously imagined.

Jon Cash, WAVY-NEWS 10 TV's morning meteorologist, has been keeping the military families in Hampton Roads informed about the weather conditions over the former Yugoslavia. And he's been using Navy METOC products to do it!

Cash co-anchors the Number 1 rated morning newscast in Hampton Roads, WAVY- NEWS 10 Sunrise from 5 until 6 a.m., and WAVY-NEWS 10 Today from 6 until 7 a.m. He also provides weather information on WAVY-NEWS 10 Midday at noon.

Cash has been linking into Naval European Meteorology and Oceanography Center in Rota, Spain, through Naval Atlantic Meteorology and Oceanography Center in Norfolk and primarily downloading satellite imagery and its graphical Mediterranean surface forecast (FSME).

He was using Navy products for about a week prior to the initial NATO strike. He is still incorporating the METEOSAT-7 visible imagery into his daily broadcast, as he has "no better imagery available from his weather vendor."

His vendor offers only four low-resolution infrared images daily over Europe. Cash said that those images "make a very choppy loop," and he prefers the visible image for its ability to show more detailed low cloud coverage and give a feel for the mountainous terrain of the region.

"The visible image tells a better story," he said.

On occasion he'll cut and paste the Mediterranean surface forecast "if it's not too busy of a picture." He said a clean, simple image works best for television.

During one broadcast he did not properly crop the "unclassified" label and the image read "classified" in the upper left corner of the screen, but no one called him on it. Cash said that it doesn't hurt his pride to go elsewhere to get the "highest quality image available."

Through WAVY-NEWS 10, Navy METOC products are getting noticed by more people than ever previously imagined. Hampton Roads, with more than 1.6 million residents, is the fourth largest Metropolitan Statistical Area in the Southeastern United States.

Our community has been competing with the quality graphics of the private-sector broadcast meteorologist for years. Now they're using our images. What a role reversal! ▲

Tres Amigos

Three old shipmates got together at NPMOF San Diego during the CNMOC/NPMOD San Diego-sponsored TAMS-RT conference. CAPT (sel) Mike Pind, CNMOC; CDR Chuck White, NPMOF San Diego; and AGCM(SW/AW) Mario Delgado, CMC HSL-43; were stationed at NWSED Roosevelt Roads, Puerto Rico from 1969 until 1971. They were in the same watch section prior to Pind qualifying as forecaster. Their rate — White (AG1), Pind (AG2/AG1) and Delgado (AG2).

The other watch section member missing, now retired, was CDR Dan Munger (AGAA). ▲



Lehr becomes first NEMOC AG duty technician

by ET2 David Stuart, Naval European Meteorology and Oceanography Center Assistant Public Affairs Officer; AG2 Michael Lehr; and LT Christopher Linder, Naval European Meteorology and Oceanography Center Public Affairs Officer

On Nov. 6, AG2 Michael Lehr became the first Aerographer's Mate (AG) to qualify as a NEMOC duty technician. This position was previously reserved for only non-AG technical ratings with formal computer and electronics troubleshooting training.

Lehr serves as the NEMOC webmaster, which requires knowledge of Unix systems and HTML. In addition, he serves as a duty technician on the electronics shop watchbill. In this capacity, he is responsible for knowing how to troubleshoot all of NEMOC's computer systems.

ET2 David Stuart caught up with AG2 Lehr after his qualification board and asked him a few questions about his experience.

Q. What was the most challenging aspect of becoming a qualified tech?

A. Learning Unix and how the homepage servers work. Learning the computer language and cronjobs that Unix-based CPUs rely so heavily upon was definitely new to me.

Q. How has becoming the first AG to qualify as a tech helped you to become a better AG?

A. I better understand the processes that move a product through its various stages until it gets to the customer. Before, I just clicked an icon, and my job was done. Now, I understand what goes on behind that click of the icon. I know where the products go next; what happens when they get there, and where they will go after that.

Q. How long did the process take?

A. The entire qualification took just over one year.

Q. What special situation afforded you the opportunity to qualify as a technician?

A. The Technical Services Department (TSD) was undermanned. NEMOC also implemented a program that called for an AG to act as full-time liaison between the operations department and TSD. Originally, it was my job to help operations understand what TSD could do to make their job easier and vice versa. The position sort of evolved into more than that when I was afforded the opportunity to learn a lot about the homepage servers. From there, because so many METOC products are posted to the web sites, it was not a far stretch to find out where the products were coming from and how they were generated.



AG2 Lehr at work.

Photo by ET2 David Stuart.

Q. Do you doubt or question your abilities to troubleshoot a particular problem because you lack formal training?

A. Sometimes I do. It depends on what system it is. Right now I feel pretty confident with my ability to close out trouble calls on Unix based systems. I still feel a little shaky when it comes to the Local Area Network and all of the NT 4.0 based machines.

Q. What advice would you give to other AGs if they were interested in becoming more knowledgeable about technical issues?

A. Again, I would have to go back to the "icon" thing. Don't just click the button and assume everything is over with. Find out what happens after you click the icon. Find out who had to click what before you could click...etc. ▲

CNO recognizes NPMOC/JTWC for PEP efforts

by LTJG Stephanie C. Belcher, Naval Pacific Meteorology and Oceanography Center/Joint Typhoon Warning Center
Public Affairs Officer and JO2 Greg Cleghorne, Navy Region Hawaii

The Naval Pacific Meteorology and Oceanography Center/Joint Typhoon Warning Center (NPMOC/JTWC) at Pearl Harbor received an Honorable Mention for its Personal Excellence Partnership Flagship in the small ashore category of the 1998 Navy Community Service of the Year Award Program.

"Our job doesn't stop at nine to five," said CAPT W. Tyson Aldinger, NPMOC/JTWC Commanding Officer.

"We feel it's important that we represent our Navy and our nation and be good stewards."

The program honors commands that exemplify one of the Navy's highest priorities – being good neighbors in local communities through volunteerism.

NPMOC/JTWC has been reaching out to the community for some time.

"We've had a partnership with Moanalua Middle School for seven years," said LTJG. James Sinclair, NPMOC/JTWC's PEP program coordinator. "Once a year we host a week-long earth science course for the 7th and 8th graders. We teach them about oceanography, hurricanes, tsunamis [and] underwater earthquakes and cap it off with launching a weather balloon. The students always seem to enjoy watching the launch of the weather balloon most."

NPMOC/JTWC's participation with the school doesn't end there. The command and about nine other organizations, such as the YMCA, the police department and the Lion's Club, stay engaged year-round.

The command participates in nearly every aspect of student life.

"Sailors tutor on a weekly basis, get involved in cultural affairs, chaperone dances, attend monthly meetings with students, school staff and other community members," Sinclair said. "We also host hurricane preparedness classes twice a year and have donated computers as part of President Clinton's 'computers in every classroom' program."

On average, the Sailors give about 15 hours per week of community service to the school," Sinclair said. "We try to bring our strengths to the classrooms and get involved on a one-on-one level."

Being recognized is nice, but giving back to the community gives NPMOC/JTWC Sailors the most gratification.

"It's always good to give back to the community, especially when it benefits the kids," said QMC(SW) Herbert Kelton, NPMOC/JTWC team member. "I have children about the same age as those we're mentoring, and I'm always glad to help out."

In his message announcing the award, ADM Jay Johnson, the CNO, echoed those sentiments. "While friendly competition helps recognize commands and volunteers, the true winners are the youth and the communities that benefit from the Navy's dedicated, capable and caring Sailors and civilians," he said. ▲

"While friendly competition helps recognize commands and volunteers, the true winners are the youth and the communities that benefit from the Navy's dedicated, capable and caring Sailors and civilians."

— ADM Jay Johnson, CNO

NAVTRAMETOC DET Corpus Christi supports local festivities

by AG1 Terry D. Crain

The Bayfest celebration in Corpus Christi, Texas, began as a bicentennial celebration in 1976 and has grown into an annual festival that is the primary fund-raiser for numerous non-profit organizations and community projects throughout Corpus Christi and the South Texas Coastal Bend.

The Shrimporee Festival in Aransas Pass, Texas, celebrates the local shrimping industry and also generates funds for various charities.

Naval Training Meteorology and Oceanography Detachment Corpus Christi personnel provided on-scene weather observation support required by the organizers of both festivities for insurance purposes. Coordinated by AG1 Terry D. Crain, 70 hours of support were provided by Steve Smith, AGCS(AW) Nancy McHale, AG1 Alan Solocinski, AG2 Eric Ballge, AG2 Larissa Harlan, AG2 Kimberly Marsh and AG2 Matthew Malone.

"Working within our field of expertise on behalf of the local community was a particularly rewarding way to spend a weekend. Good weather and good Texas barbecue helped, too," said Ballge, a volunteer who summed up the sentiments of all participants. ▲

accomplishments

Navy and Marine Corps Commendation Medal	J. Conway, AGC(AW) Francis K. Sullivan, RMI Rolando Gonzalez, AG1 Cheryl A. Kallenbach, AG1(AW) Robert L. Lamb, AG1 David J. Rackley, AG1(AW) John W. Raines, ET1 Andrew C. Schwartz, AG1(SW) Kent M. Simons, SK2 Ric C. Belarmino and RM2 Brian P. Miller, NPMOC/ JTWC Guam	Good Conduct Medal AGCS Laurie Cecil, AGC Frances Arrington, QMC Greg Geurin, AG2 Kevin Atchison, AG2 Jason Brault, AG2 James Morgan and AG2 Beth Sierra, NPMOC San Diego	AG2 Karen Jenkins, NLMOC Norfolk AG2 Jessica J. Schilder, NLMOD Patuxent River	White and AGAN Stephen R. Bacon, NPMOC/JTWC Guam
LCDR J. Mark Fair, NAVAIRES San Diego				AGC(AW/NAC/SG) Trent W. Pontow, NLMOF Jacksonville
LCDR Iatrou, LT Davids and LT Santamoura, FNMOC Monterey				AG1 Sean Gee and AG3 Carin Innes, NPMOD Diego Garcia
LCDR Joseph C. Johnson, LT Jimmy D. Horne, ETCS(SW) Clifton C. Seney and AGC(AW) Roland S. Alfeler, NEMOC Rota			Humanitarian Service Medal CDR Debra M. Ford, LCDR Kenneth A. Malmquist, LCDR Margaret A. Smith, LCDR Steven W. Warren, LT David Blencoe, LT Anthony F. Gilless, LT Jimmy D. Horne, LT Catherine M. McDougall, LT Marc E. Touchton, LTJG Thomas A. Moneymaker, AGCM Robert W. Harlan, AGCS Jon T. Johnston, AGC Roland S. Alfeler, AGC Jill V. Johnston, AGC(AW) Jo C. Nall, AGC(AW) Francis K. Sullivan, AGC(SW/AW) Brian K. Wells, AG1	Joint Service Commendation Medal CAPT Stephen B. Cocks, CAPT Tom D. Lunsford, LCDR Margaret A. Smith, LCDR Steven W. Warren, AG1 Paul G. Sanchez, AG2 Keyia S. Hall, SRA Dionne M. Tirschel and A1C Amber D. Goodman, NPMOC/ JTWC Guam
LT Santiago Carrizosa, NPMOD Diego Garcia				
LT Michael Grossman and AG1 Troy Coomes, NTMOF Pensacola				Length of Service Award Mr. Thomas Beeck (25 years), Mr. Mike Clancy (20 years), Mr. James Copeland (10 years), Mr. Richard Edwards (35 years), Mr. Martin Figueroa (20 years), Ms. Jeanne Frew (30 years), Ms. Belen Gines (20 years), Mr. Joseph Haggerty (20 years), Ms. Sandi Miller (30 years), Mr. Richard Perez (25 years), Mr. Roland Picard (35 years), Ms. Rose Pisares (12 years) and Ms. Michelle Stevens (10 years), FNMOC Monterey
AGC(AW/SW) Tina Lambert, NLMOF Jacksonville				
AGC Patrick K. Prentice, NEMOC Rota				
AGC David Rawls, NLMOC Norfolk				
Navy and Marine Corps Achievement Medal				
CDR Rutledge P. Lumpkin, LTJG Robert F. Crofoot, AGCS(AW/SW) Debora L. Doney, AGC(AW/SW) David W. Cuthbert, AG1 Everett J. Lovenbury, AG1(AW) James H. Spriggs, RM2 Senia V. Clark, AG2 Stephen J. Daniel, Jr. and AG3 Angela M. Evans, NEMOC Rota				
LTJG Katie Nefflen, NLMOC Norfolk				
LT Anthony F. Gilless, LT Catherine M. McDougall, LTJG Thomas A. Moneymaker, ENS Bruce				Meritorious Unit Commendation CDR Debra M. Ford, LCDR Margaret A. Smith, LCDR Steven W. Warren, LT David Blencoe, LT Anthony F. Gilless, LT

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accomplishments

<p>Jimmy D. Horne, LT Catherine M. McDougall, LTJG Thomas A. Moneymaker, ENS Sean P. Coleman, ETCS Clifton C. Seney, AGC(AW) Roland S. Alfedor, AGC(AW) Jo C. Nall, AGC(AW) Francis K. Sullivan, RM1 Rolando Gonzalez, AG1 Robert L. Lamb, AG1(AW) John W. Raines, AG1 Jose F. Rojas-Benitez, AG1 Paul G. Sanchez, AG2 Freddie T. Byrley, AG2 Keyia S. Hall, RM2 Brian P. Miller, AG3 Shawn M. Clayton, AG3 Julie L. Diener, AG3 Keith A. Holder, AG3 Carol A. Gill, AG3 Jessica Reza, AG3 Jennifer A. White, ET3 Matthew L. White and AGAN Stephen R. Bacon, NPMOC/JTWC Guam</p> <p>Overseas Service Ribbon</p> <p>AG1 Randy Fisher, AG2 Tanya Adkins, AG2 Sonia Belardo, AG2 Brian Benoit and AG2 Jack Tegrootenhuis, NPMOD Diego Garcia</p> <p>Certificate of Appreciation</p> <p>LT Paula E. Hildebrand, ENS Bruce J. Conway, AG1 Kent M. Simons and AG3 Jennifer A. White, NPMOC/JTWC Guam</p> <p>Legion of Merit</p> <p>CAPT Thomas Q. Donaldson, NLMOC Norfolk</p> <p>Letter of Appreciation</p> <p>LCDR Dimitriou, Ms. Gudny Campbell, Ms. Mary Estrada, Mr. Tom</p>	<p>Knopp, Mr. Jim Mclean and Mr. Ken Pollack, FNMOC Monterey</p> <p>ENS Bruce J. Conway, AGC Francis K. Sullivan, AG1 Cheryl A. Kallenbach and AG1(AW) Robert L. Lamb, NPMOC/JTWC Guam</p> <p>AGC(SW) Paul D. Rossmann, FC1(SW) Brian J. Clapp, AG1 Carl G. Dillard, AG1 Michael E. Watts, AG2(SW) Carrie M. Miller and AG2 Cyndee L. Warlick, NLMOF Jacksonville</p> <p>AG1 Trish Bednareczk and AG2 Jonathan Pittman, NTMOF Pensacola</p> <p>AG1(AW/SW) Ralph Caravello, NLMOD Virginia Beach</p> <p>AW1 Curtis Santino, AG2 James Morgan, AGAN Pablo Flores and Ms. Angie Thomas, NPMOF San Diego</p> <p>AG1(SW) David J. Schmidtke, AG1 Chad P. Swick, AG1 Bryan W. Thomas, AG1(AW) Stephen M. Webb, AG2 Andrew L. Stover and AG3 Paul G. Rockwood, NLMOD Patuxent River</p> <p>ET1 Lyndon S. Wolken, ET1 Daniel S. Wright and AN Conrad S. King, NTTU Keesler</p> <p>AG2 Luis Varela, NEMOC Rota</p> <p>AG3 Robert P. Rossi, NLMOD Guantanamo Bay</p>	<p>Letter of Commendation</p> <p>LT Michael P. Krieger, NLMOF Jacksonville</p> <p>CDR Debra M. Ford, LCDR Margaret A. Smith, LCDR Steven W. Warren, LT David Blencoe, LT Anthony F. Gilless, LT Catherine M. McDougall, LTJG Thomas Moneymaker, ENS Sean P. Coleman, ETCS Clifton C. Seney, AGC(AW) Roland S. Alfedor, AGC(AW) Jo C. Nall, AGC(AW) Francis K. Sullivan, RM1 Rolando Gonzalez, PN1 Paul H. Jones, AG1 Robert L. Lamb, AG1 Christopher G. Noble, AG1 Byron A. Reagan, AG1 Jose F. Rojas-Benitez, AG1 John W. Raines, AG1 Paul G. Sanchez, ET1 Andrew C. Schwartz, AG1 Kent M. Simons, SK2 Ric C. Belarmino, AG2 Freddie T. Byrley, AG2 Keyia S. Hall, RM2 Brian P. Miller, AG2 Erica Y. Poole, AG3 Shawn M. Clayton, AG3 Julie L. Diener, AG3 Keith A. Holder, AG3 Carol A. Gill, AG3 Jessica Reza, AG3 Jennifer A. White, ET3 Matthew L. White and AGAN Stephen R. Bacon, NPMOC/JTWC Guam</p> <p>ETC(SW) Theresa G. Santoro, AG1(AW) Mary E. Okoniewski, CTA2 Jennifer L. Barnes, AT2 Janis A. Silvano and YN3 Michelle L. Foreman, NTTU Keesler</p> <p>AG1 James Blossfield, NLMOF Guantanamo Bay</p>	<p>AG1(NAC) John J. Runyan, COMSECONDFLT</p> <p>AG2(SW) Brandon A. Benton, USS ENTERPRISE</p> <p>AG2 Jason A. Green, NPMOD Misawa</p> <p>AG2(AW) Jolaine R. Moore and AG3 Brian P. Stillings, NLMOD Cecil Field</p> <p>AG3 Carin Innes and AG3 Michael Montgomery, NPMOD Diego Garcia</p> <p>AG3 James Knox, NLMOD Virginia Beach</p> <p>Advancements</p> <p>AG1(AW) Kelly Collins, 82nd Reconnaissance Squadron</p> <p>Aviation Forecaster</p> <p>AG1 Brian J. Aronian, NEMOC Rota</p> <p>AG1(AW) Michael J. Harris and AG2(AW) Gary D. Martell, USS ENTERPRISE</p> <p>Aviation Surface Weather Observer</p> <p>AG3 Christopher Edwards, NLMOD Virginia Beach</p> <p>Blue Jacket of the Quarter</p> <p>AG3 Angela M. Evans, NEMOC Rota</p> <p>AGAN Carla S. Caesar, NLMOD Roosevelt Roads</p> <p>Civilian of the Quarter</p> <p>Steven V. Turco, NLMOD Cecil Field</p>	<p>Command Advancement Program Promotion</p> <p>YN1 Richard W. Wesley, NEMOC Rota</p> <p>Computer Systems Operator</p> <p>AG2 Ryan N. McKinney, NEMOC Rota</p> <p>Enlisted Surface Warfare Specialist</p> <p>AG1(SW) Theresa M. Markkula and AG1(SW) Wane M. Foley, COMSECONDFLT</p> <p>Forecast Duty Officer</p> <p>LT Christopher A. Linder and AG1 Steven D. Pulley, NEMOC Rota</p> <p>Forecaster</p> <p>AG1 Thomas Foreman, AG2 Kevin Atchison and AG3 Minh Ho, NPMOF San Diego</p> <p>AG1 Sean Gee, AG1(AW) Kelly Collins and AG2 Daniel Stankiewicz, 82nd Reconnaissance Squadron</p> <p>AG1 Chad P. Swick, NLMOD Patuxent River</p> <p>Gold Level Award for 1998 Combined Federal Campaign</p> <p>AT1(AW) Greg A. Ohliger, NTTU Keesler</p> <p>Hurricane Duty Officer</p> <p>AG1(AW) Tyra S. Gaynor, NLMOF Jacksonville</p>
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accomplishments

Master Instructor Certificate	Johnson, NLMOD Roosevelt Roads	AG2 James Morgan, NPMOF San Diego	Tactical Oceanography Forecaster
AGC(AW) Mary C. Eveld, NTTU Keesler	AGAA Brady Peecher, NTMOF Pensacola	AG2 Chadwick I. Smith, NPMOF Misawa	LT Kris A. Caylor, LT Dominick A. Vincent, AG1 Michael J. Bradley and AG1(AW/SW) James S. Hibbs, NLMOF Jacksonville
MET Team Leader	Oceanographic Duty Officer	AG2 Squeo (senior) and AGAA Jason Lowery, FNMOC Monterey	Upper Air Observer
AG2 Gregory A. Rose, NEMOC Rota	AGAA Tyesha S. Jones, NPMOF Misawa	Sailor of the Year	AG2 Keith A. Ferrell and AG2 Richard A. Lehmkuhl, USS ENTERPRISE
METOC Technician	Oceanography Technician	AG1 James B. Golliday, NLMOD Guantanamo Bay	AG3 Eileen Sousa and AGAA David Johnson, NPMOF San Diego
AGAN Egurrola, FNMOC Monterey	AG3 Antonia M. Taite, NLMOF Jacksonville	AG1(AW) Stanley J. Keller (sea) and AW2(NAC) Shawn D. Webber, NLMOF Jacksonville	Weather Certification
Observer	Reenlistment	AG2 Jason A. Green, NPMOF Misawa	AG2 Charles Wright, NTMOF Pensacola
AG2 Antonio Bates, AG3 Carin Innes and AGAN Kimberley Hanson, 82 nd Reconnaissance Squadron	AG1 Guy Matz, NTMOD Meridian	Section Leader	
AG2 James M. Derrick, AG3 Fenton I. Chavez, AG3 Russel T. Moody and AGAA Jerome N. Saucier, NLMOF Jacksonville	AGCS James Rawls, NTMOD Meridian	AG2 James M. Derrick and AG3 Fenton L. Chavez, NLMOF Jacksonville	
AG2 James J. Stratton, AG3 Dontri L. Bulls, AG3 Eric L. Spivey and Anjail F. Weaver, NLMOD Cecil Field	AGC(AW/SW) Tina Lambert and AG1 Stewart, NLMOF Jacksonville	AG2 James E. Pollock, USS ENTERPRISE	
AG3 Dontri L. Bulls, NLMOD Patuxent River	Sailor of the Quarter	Surface Weather Observer	
AG3 Dekiedra Grind, AGAN Donald Sanders and AGAR Leila Villarreal, NTMOD Meridian	AG1(SW) Paul Brabenec (senior), NLMOC Norfolk	AG2 James E. Pollock, USS ENTERPRISE	
AG3 Billy D. Scott, III, NEMOC Rota	AG1(AW) Stanley J. Keller (sea), NLMOF Jacksonville	Sub-Regional Forecaster	
AG3 Eileen Sousa, AGAN Jeremy Bussell and AGAA David Johnson, NPMOF San Diego	AG1(AW) Stephen M. Webb (regional/senior) and AG3 Paul G. Rockwood, NLMOD Patuxent River	AG1 John C. Brown, NLMOF Jacksonville	
AGAA Andre Budgewater, AGAR Eugene Douglas and AGAA Christopher	AG2 Sonia Belardo (senior), 82 nd Reconnaissance Squadron	Sub-Regional Forecasting Duty Officer	
	FC2 Felix Hotard, NTMOF Pensacola	AG1 Gregory L. Bogert, AG1 James A. Gamble, AG1 Brian W. Langeland, AG1 Steven D. Pulley, AG1 John E. Reinhardt and AG1 John L. Wendels, NEMOC Rota	
	AG2 Carla E. Murray (senior), NLMOD Roosevelt Roads		



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